

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: SI03

Event #: 1

Ship: TULLY

UTC Date (dd|mmm|yyyy): 7 June 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	1	2007	0.00	300	✓ 215	✓	✓									
2	2	2015	0.00	200	✓ 200	✓	✓	✓								
3	3	2032	0.00	175	✓ 173	✓	✓	✓								
4	4	2035	0.046	150	✓ 150	✓										
5	5	3109	0.603	125	✓ 125											
6	6	2064	1.591	100	✓ 100				✓							can't after trip
7	7	2067	3.327	75	✓ 75				✓							
8	8	2099	5.033	50	✓ 50		✓		✓							
9	9	3010	6.572	25	✓ 25				✓							* FLASHES 4 & 4A ARE REVERSED
10	10	3034	7.958	10	✓ 10				✓							
11	11	3038	9.845	5	✓ 5			✓	✓							
12																
13																
14	4A	3040	0.020	150												All tripped @ surface to test
15																
16																
17																
18																
19																
20																
21																
22																
23																
24	✓															

Watchkeeper(s): DY + HM et al

Bottom Depth: 225 m

Transmissio Cleaned: (Y) / N

Time	UTC	Local
Start	0110	1816
Bottom	0114	1814
End	0130	1830

Positional Information

Start Lat: 48 ° 35.41 N
Lon: 123 ° 30.08 W

Bottom Lat: 48 ° 35.38 N
Lon: 123 ° 30.11 W

End Lat: 48 ° 35.36 N
Lon: 123 ° 30.12 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: 1 / 1 / 1

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

OXY - BLUE BOX

NUTS - ORANGE RACK

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P2

Event #: 3

Ship: TULLY

UTC Date (dd|mmm|yyyy): 7 June 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments		
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄ DMS	HPIC	DMSP C	DMSP D		DIC	pH
1	13	2007	1.888	Bot-10	✓ 106	✓	✓	✓						✓	✓	
2	14	2015	2.608	100	✓ 100	✓		✓✓						✓	✓	
3	15	—	—	100	✓ 100				✓	✓		✓✓	✓✓			
4	16	—	—	75	✓ 75				✓	✓						
5	17	2032	2.609	75	✓ 75	✓		✓						✓	✓	
6	18	2035	2.614	75	✓ 75	✓		✓						✓✓	✓✓	
7	19	3109	3.527	50	✓ 50	✓✓		✓						✓	✓	
8	20	—	—	50	✓ 50				✓✓	✓						) Chl possibly mixed (206 & 21) during filtering
9	21	—	—	40	✓ 40		✓		✓	✓						
10	22	—	—	30	✓ 30				✓	✓						
11	23	—	—	25	✓ 25				✓	✓	✓✓					
12	24	2064	5.714	25	✓ 25	✓		✓						✓	✓	
13	25	—	—	20	✓ 20				✓	✓✓		✓✓	✓✓			
14	26	—	—	15	✓ 15				✓	✓						
15	27	—	—	10	✓ 10				✓	✓	✓✓					
16	28	2087	7.637	10	✓ 10	✓		✓						✓	✓	
17	29	2099	7.499	5	✓ 5	✓		✓						✓	✓	
18	30	—	—	5	✓ 5				✓	✓	✓✓	✓✓	✓✓			
19	31	—	—	0	✓ 1.1		✓		✓	✓		✓✓	✓✓			
20																
21																
22	19	3040	3.53%	50												
23																
24																

Watchkeeper(s): DY

Bottom Depth: 118 m

Transmissio Cleaned: Y / N

Time	UTC	Local
Start	1903	1203
Bottom	1905	1205
End	1919	1209

Positional Information

Start	Lat: <u>48° 36.09</u>	N
	Lon: <u>126° 0.04</u>	W

Bottom

Lat: <u>48° 36.15</u>	N
Lon: <u>125° 59.99</u>	W

End

Lat: <u>48° 36.13</u>	N
Lon: <u>125° 59.96</u>	W

Oxygen Info For This Cast

Blank Value: _____ mL • L⁻¹

Std Value: _____ mL • L⁻¹

*Date Run: ____/____/____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

OXY BLUE BOX NUTS GREEN RACK

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P3

Event #: 6

Ship: TULLY

UTC Date (dd|mmm|yyyy): 07 | Jun | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments		
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	ph ₇₋₁₀					
1	32			600	✓											} UAC
2	33			600	✓											
3	34			10	✓											
4	35			5	✓		✓	✓	✓		✓✓					
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s):
MR-DG-MB

Bottom Depth: 767 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2155	1455
Bottom	2209	1509
End		

Positional Information

Start
Lat: 48° 37.19 N
Lon: 126° 19.58 W

Bottom
Lat: 48° 37.12 N
Lon: 126° 19.58 W

End
Lat: ° N
Lon: ° W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P4

Event #: 7

Ship: TULLY

UTC Date (dd|mmm|yyyy): 8 June 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DIC		DAPIA			
1	36			600	✓ 600								✓			
2	37			300	✓ 300								✓			
3	38			150	✓ 150								✓			
4	39			75	✓ 75								✓			
5	40		27	1%	✓ 27								✓			
6	41		27	1%	✓ 27		✓		✓	✓	✓					
7	42		13	10%	✓ 13		✓		✓	✓	✓					
8	43		13	10%	✓ 13								✓			
9	44		8	30%	✓ 8								✓			
10	45		8	30%	✓ 8		✓		✓	✓	✓					
11	46		5	50%	✓ 5		✓		✓	✓	✓					
12	47		5	50%	✓ 5								✓			
13	48		0	100%	✓ 1.6								✓			
14	49		0	100%	✓ 1.6		✓		✓	✓	✓					
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): BY

Bottom Depth: 1308 m

Transmissio Cleaned: ☒ Y / ☐ N

	Time	UTC	Local
Start		0011	1711
Bottom		0017	1717
End		0040	1740

Positional Information

Start
 Lat: 48 ° 39.01 N
 Lon: 126 ° 39.80 W

Bottom
 Lat: 48 ° 38.99 N
 Lon: 126 ° 39.87 W

End
 Lat: 48 ° 38.96 N
 Lon: 126 ° 39.99 W

Oxygen Info For This Cast

Blank Value: _____ mL • L⁻¹
 Std Value: _____ mL • L⁻¹
 *Date Run: ____ | ____ | ____
 Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P4

Event #: 10

Ship: Tully

UTC Date (dd|mmm|yyyy): 8 | June | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy DMS	Nut	Sal	Chl a	NO₃ HPLC	DMS ₂ C	DMS ₂ D	DNAL	OXY	phlo	
1	50			200	✓ 200	✓	✓				✓	✓				
2	51			175	✓ 175	✓	✓				✓	✓				
3	52			100	✓ 101	✓	✓✓		✓		✓	✓				
4	53			75	✓ 74	✓	✓		✓							
5	54			75	✓ 74								✓✓	✓✓		
6	55			50	✓ 50	✓	✓		✓							
7	56			40	✓ 40	✓	✓		✓							
8	57			40	✓ 40								✓✓	✓✓		
9	58			30	✓ 30	✓	✓		✓✓							
10	59			25	✓ 25	✓	✓		✓	✓✓						
11	60			20	✓ 20	✓✓	✓		✓		✓✓	✓✓				
12	61			20	✓ 20								✓✓	✓✓		
13	62			15	✓ 15	✓	✓		✓							
14	63			10	✓ 10	✓	✓		✓	✓✓						
15	64			5	✓ 5	✓	✓		✓	✓✓	✓	✓			✓✓✓	
16	65			5	✓ 5								✓✓	✓✓		
17	66			0	✓ 1.7	✓	✓		✓		✓	✓				
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): DY

Bottom Depth: 1318 m

Transmisso Cleaned: Y / N

	Time	UTC	Local
Start		<u>0102</u>	
Bottom		<u>0205</u>	
End		<u>0223</u>	

Positional Information

Start	Lat: <u>48</u> ° <u>38.97</u>	N
	Lon: <u>126</u> ° <u>39.99</u>	W

Bottom

Lat: <u>48</u> ° <u>38.97</u>	N
Lon: <u>126</u> ° <u>39.99</u>	W

End

Lat: <u>48</u> ° <u>38.95</u>	N
Lon: <u>126</u> ° <u>40.02</u>	W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P4

Event #: 11

Ship: Tully

UTC Date (dd|mmm|yyyy): 08 | June | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NO₃ D12	PH	UBC				
1	67	76	0.375	Bot-10	✓ 1322	✓	✓	✓		✓	✓					
2	68	371	0.318	1250	✓ 1250	✓	✓	✓		✓	✓	✓				
3	69	557	0.312	1250	✓ 1250					✓						
4	70	559	0.178	1000	✓ 1000			✓			✓	✓				
5	71	632	0.226	800	✓ 800						✓	✓				
6	72	13206	0.315	600	✓ 600	✓						✓				
7	73	1085	0.877	400	✓ 400							✓				
8	74	1158	1.516	300	✓ 300							✓				
9	75	1312	1.815	250	✓ 250											
10	76	1365	2.433	200	✓ 200							✓				
11	77	2014	2.595	175	✓ 175											
12	78	2033	3.194	150	✓ 150							✓				
13	79	2075	4.295	125	✓ 125											
14	80	2092	4.485	100	✓ 100		✓					✓				
15	81	3024	6.397	75	✓ 75											
16	82	3063	6.779	50	✓ 49							✓				
17	83	3084	6.930	25	✓ 25							✓				
18	84	3094	7.323	10	✓ 10							✓				
19	85	3097	7.152	5	✓ 5	✓	✓	✓		✓	✓					
20																
21																
22	72	586	0.317	600												
23																
24																

Watchkeeper(s): 24

Bottom Depth: 1317 m

Transmissio Cleaned: Y / N

Time	UTC	Local
Start	<u>0351</u>	
Bottom	<u>0413</u>	
End		

Positional Information

Start

Lat: 48 ° 38.98 N

Lon: 126 ° 39.86 W

Bottom

Lat: 48 ° 38.95 N

Lon: 126 ° 39.97 W

End

Lat: 48 ° 38.90 N

Lon: 126 ° 40.00 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: | |

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

④ Deep UBC cast Rosette Log

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

Cruise ID: 2009-09

Station: P4

Event #: 13

Ship: Tully

UTC Date (dd|mmm|yyyy): 8 | Jun | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	86			1300	✓		✓	✓								
2	87			1300	✓											
3	88			1300	✓											
4	89			1300	✓											
5	90			1300	✓											
6	91			1300	✓											
7	92			1300	✓											
8	93			1300	✓											
9	94			1300	✓											
10	95			1300	✓											
11	96			1300	✓											
12	97			1300	✓											
13	98			500	✓		✓									
14	99			500	✓											
15	100				✓											
16	101				✓											
17	102				✓											
18	103				✓											
19	104				✓											
20	105				✓											
21	106				✓											
22	107				✓											
23	108			500	✓											
24	109			500	✓											

Watchkeeper(s): H.M./R.k./k.m./m.l.

Bottom Depth: 1310 m

Transmissio Cleaned: (Y) / N

	UTC	Local
Time Start	<u>0744</u>	
Bottom	<u>0805</u>	
End		

Positional Information

Start
Lat: 48 ° 38.96 N
Lon: 126 ° 39.78 W

Bottom
Lat: 48 ° 39.02 N
Lon: 126 ° 39.87 W

End
Lat: ° N
Lon: ° W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P4 Event #: 14 & 15 Ship: TULLY UTC Date (dd|mmm|yyyy): 08 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	110			1000	✓		✓	✓								
2	111			1000	✓											
3	112				✓											
4	113				✓											
5	114				✓											
6	115				✓											
7	116				✓											
8	117				✓											
9	118				✓											
10	119				✓											
11	120			1000	✓											
12	121			1000	✓											
13	122			10	✓		✓									
14	123			10	✓											
15	124			10	✓											
16	125			10	✓											
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): HUGHES TEAM

Bottom Depth: 1308 m

Transmissio Cleaned: Y / N

	Time	UTC	Local
Start		1009	
Bottom		1031	
End		1050	

Positional Information

Start

Lat: 48 ° 39.02 N

Lon: 126 ° 39.95 W

Bottom

Lat: 48 ° 39.05 N

Lon: 126 ° 40.01 W

End

Lat: 48 ° 39.11 N

Lon: 126 ° 39.99 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P8 Event #: 20 Ship: TULLY UTC Date (dd|mmm|yyyy): 08 | Jun | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	HPLC	Phyto		
1	129	2007	0.979	2000	✓ 2000	✓	✓	✓						
2	130	2015	0.388	1500	✓									
3	131	2032	0.067	1250	✓									
4	132	2035	0.223	1000	✓ 999									
5	133	3109	0.192	800	✓ 800									
6	134	2064	0.343	600	✓ 600									} 5L for Nts
7	135	2087	0.334	600	✓ 600									
8	136	2099	0.964	400	✓ 400									
9	137	3018	1.409	300	✓ 301									
10	138	3034	2.655	250	✓ 249									
11	139	3038	3.120	200	✓ 199		✓							
12	140	2055	3.340	175	✓ 176									
13	141	3052	3.199	150	✓ 150									
14	142	3055	4.235	125	✓ 127									
15	143	3057	5.376	100	✓ 100				✓					
16	144	3075	6.746	75	✓ 75	✓			✓					
17	145	3098	6.166	50	✓ 50				✓					
18	146	1492	5.400	25	✓ 25				✓		✓			
19	147	3124	6.880	10	✓ 10				✓		✓	✓		
20	148	3169	6.823	5	✓ 5				✓		✓	✓		} 5L for Nts
21	149	3171	6.820	5	✓ 5	✓			✓			✓		
22														
23	144	3040	6.745	75										
24														

Watchkeeper(s): DRY, MB, DG

Bottom Depth: 2518 m

Transmissio Cleaned: (Y) / N

Time	UTC	Local
Start	2339	1639
Bottom	0005	1705
End	0054	1754

Positional Information

Start
Lat: 48 ° 48.99 N
Lon: 128 ° 39.96 W

Bottom
Lat: 48 ° 48.98 N
Lon: 128 ° 39.92 W

End
Lat: 48 ° 48.90 N
Lon: 128 ° 39.79 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹
Std Value: _____ mL · L⁻¹
*Date Run: ____ | ____ | ____
Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Nts - Blue Oxy - Blue box

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P12 Event #: 25 Ship: TULLY UTC Date (dd|mmm|yyyy): 9 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	CH pH	TH DIC	UBC	OLI				
1	153	2007	2.404	Bot-10	✓ 3220	✓	✓	✓	✓	✓	✓	✓				
2	154	2015	2.292	3000	✓				✓	✓						
3	155	2032	2.283	3000	✓			✓	✓		✓					
4	156	2035	1.913	2500	✓				✓							
5	157	3109	1.345	2000	✓				✓		✓	✓				
6	158	2064	0.559	1500	✓				✓		✓					
7	159	2087	0.374	1250	✓						✓					
8	160	2099	0.234	1000	✓				✓		✓	✓				
9	161	3018	0.282	800	✓				✓		✓					
10	162	3034	0.576	600	✓		✓		✓		✓					
11	163	3038	1.562	400	✓						✓					
12	164	2055	2.754	300	✓				✓		✓					
13	165	3052	3.484	250	✓							✓				
14	166	3055	4.136	200	✓				✓		✓					
15	167	3057	4.578	175	✓											
16	168	3075	5.173	150	✓	✓			✓		✓					
17	169	3098	6.036	125	✓											
18	170	1492	6.633	100	✓				✓		✓	✓				
19	171	3124	6.988	75	✓				✓							
20	172	3164	7.031	50	✓				✓		✓	✓				
21	173	3171	7.032	25	✓				✓		✓	✓				
22	174	3203	6.779	10	✓				✓		✓	✓				
23	175	1497	6.764	5	✓	✓	✓	✓	✓	✓		✓				
24	168	3040	5.194	150												

Watchkeeper(s):
Team August

Bottom Depth: 3287 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1323	0623
Bottom	1409	0709
End	1517	

Positional Information

Start
Lat: 48 ° 58.15 N
Lon: 130 ° 40.23 W

Bottom
Lat: 48 ° 58.23 N
Lon: 130 ° 40.08 W

End
Lat: 48 ° 58.10 N
Lon: 130 ° 40.10 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

OXY BLUE BOX

NUTS LT BLUE RACK

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P12 Event #: 31 Ship: TULLY UTC Date (dd|mmm|yyyy): 9 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy DMS	Nut	Sat HALL	Chl a	NEP DMSO	Paras	ONAR OXY				
1	176			600	✓						✓					
2	177			300	✓						✓					
3	178			200	✓	✓	✓			✓						
4	179			175	✓	✓	✓			✓						
5	180			150	✓ 150						✓					
6	181			100	✓ 101	✓	✓		✓	✓						
7	182			75	✓ 75	✓	✓		✓							
8	183			75	✓ 45						✓					
9	184			50	✓ 50	✓	✓		✓							
10	185			40	✓ 40	✓	✓		✓							
11	186			30	✓ 30	✓	✓		✓							
12	187			1%	✓ 57						✓					
13	188			25	✓ 25	✓	✓	✓	✓							
14	189			20	✓ 20	✓	✓		✓	✓						
15	190			15	✓ 15	✓	✓		✓							
16	191			10%	✓ 27						✓					
17	192			10	✓ 10	✓	✓	✓	✓							
18	193			30%	✓ 11						✓					
19	194			50%	✓ 6						✓					
20	195			5	✓							✓				
21	196			5	✓	✓	✓	✓	✓	✓						
22	197			0	✓	✓	✓		✓	✓						
23	198			100%	✓ 0						✓					
24																

Watchkeeper(s):
TEAM HUGH

Bottom Depth: 3235 m

Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		1823	
Bottom		18	
End		1905	1205

Positional Information

Start

Lat: 48 ° 58.29 N

Lon: 130 ° 38.86 W

Bottom

Lat: 48 ° 59. N

Lon: 130 ° 39. W

End

Lat: 48 ° 58.13 N

Lon: 130 ° 39.94 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P12

Event #: 34

Ship: TULLY

UTC Date (dd|mmm|yyyy): 9 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed √ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	UOL					
1	199			2000	✓		✓	✓			✓					
2	200			2000	✓											
3	201				✓											
4	202				✓											
5	203				✓											
6	204				✓											
7	205				✓											
8	206				✓											
9	207				✓											
10	208				✓											
11	209			2000	✓											
12	210			2000	✓											
13	211			500	✓		✓				✓					
14	212			500	✓											
15	213				✓											
16	214				✓											
17	215				✓											
18	216				✓											
19	217				✓											
20	218				✓											
21	219				✓											
22	220				✓											
23	221			500	✓											
24	222			500	✓											

Watchkeeper(s): MR DY

Bottom Depth: 3236 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2018	1318
Bottom	2050	1350
End	2117	1417

Positional Information

Start
 Lat: 48 ° 58.16 N
 Lon: 130 ° 39.96 W

Bottom
 Lat: 48 ° 58.14 N
 Lon: 130 ° 39.87 W

End
 Lat: 48 ° 58.20 N
 Lon: 130 ° 39.51 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

UBC Shallow Cast
Rosette Log

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

Cruise ID: 2009-09

Station: P12

Event #: 35

Ship: Tully

UTC Date (dd|mmm|yyyy): 9 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken											Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DO ₂						
1	223			1000	☒		☒	☒			☒						
2	224			1000	☒												
3	225				☒												
4	226				☒												
5	227				☒												
6	228				☒												
7	229				☒												
8	230				☒												
9	231				☒												
10	232				☒												
11	233			1000	☒												
12	234			1000	☒												
13	235			10			☒			☒							
14	236			10													
15	237			10													
16	238			10													
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): DY DG

Bottom Depth: 3236 m

Transmissio Cleaned: Y / N

Time	UTC	Local
Start	223	1513
Bottom	228	1530
End	2247	1547

Positional Information

Start	Lat:	48 ° 58.17	N
	Lon:	130 ° 39.94	W

Bottom	Lat:	48 ° 58.19	N
	Lon:	130 ° 39.85	W

End	Lat:	48 ° 58.18	N
	Lon:	130 ° 39.71	W

Oxygen Info For This Cast

Blank Value:		mL · L ⁻¹
Std Value:		mL · L ⁻¹
*Date Run:		
Analyst:		

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P13 Event #: 36 Ship: Tully UTC Date (dd|mmm|yyyy): 9 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄				
1	239			200	☒ 200									
2	240			5										
3	241			5			☒	☒	☒					
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24	247			200										

Watchkeeper(s): dy

Bottom Depth: 3309 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	0300	2000
Bottom	0323	
End	0349	

Positional Information

Start Lat: 49 ° 2.61 N
Lon: 131 ° 39.98 W

Bottom Lat: 49 ° 02.62 N
Lon: 131 ° 39.98 W

End Lat: 49 ° 02.63 N
Lon: 131 ° 39.98 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P16 Event #: 39 Ship: TULLY UTC Date (dd|mmm|yyyy): 10 | 06 | 00

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy DMS	Nut	Sal	Chl a	NH ₄	DMSA E/D	HPLC				
1	244			200	☒	✓	✓				✓					
2	245			175	☒	✓	✓				✓					
3	246			100	☒	✓	✓		✓		✓					
4	247			75	☒	✓	✓									
5	248			50	☒	✓	✓									
6	249			40	☒	✓	✓									
7	250			30	☒	✓	✓									
8	251			25	☒	✓	✓					✓✓				
9	252			20	☒	✓	✓		✓		✓✓					
10	253			15	☒	✓	✓					✓✓				
11	254			10	☒	✓	✓					✓✓				
12	255			5	☒	✓	✓				✓	✓✓				
13	256			0	☒	✓	✓				✓					
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): TEAM HUGH

Bottom Depth: 3633 m

Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	1816	
Bottom	1820	
End	1836	

Positional Information

Start Lat: 49 ° 16 97 N
Lon: 134 ° 40 .13 W

Bottom Lat: 49 ° 16 93 N
Lon: 134 ° 40 09 W

End Lat: 49 ° 16 17 02 N
Lon: 134 ° 40 39.95 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

② LIGHT / ONAR CAST

Rosette Log

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

Cruise ID: 2009-09

Station: P16

Event #: 40

Ship: TULLY

UTC Date (dd|mmm|yyyy): 10 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken											Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy DIC	Nut	Sal	Chl a	NH ₄	DAMON	ONAR					
1	257			600	✓						✓						
2	258			300	✓						✓						
3	259			150	✓						✓						
4	260			75	✓						✓						
5	261			75	✓							✓					
6	262			1%	✓	61					✓						
7	263			1%	✓	61	✓	✓✓	✓								
8	264			40	✓							✓					
9	265			10%	✓	31					✓						
10	266			10%	✓	31	✓	✓✓	✓								
11	267			20	✓							✓					
12	268			30%	✓	14	✓	✓✓	✓								
13	269			30%	✓	14					✓						
14	270			55%		6					✓						
15	271			55%		6	✓	✓✓	✓								
16	272			5								✓					
17	273			100%		0					✓						
18	274			100%		0	✓	✓✓	✓								
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): DY DG

Bottom Depth: 3634 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1915	1215
Bottom	1924	1224
End	1947	1247

Positional Information

Start	Lat: 49 ° 16.96 N
	Lon: 134 ° 39.96 W
Bottom	Lat: 49 ° 16.99 N
	Lon: 134 ° 39.94 W
End	Lat: 49 ° 16.99 N
	Lon: 134 ° 39.92 W

Oxygen Info For This Cast

Blank Value:	_____ mL · L ⁻¹
Std Value:	_____ mL · L ⁻¹
*Date Run:	____ ____ ____
Analyst:	_____

* Oxygen blanks and standards should be run daily, if possible

③ IOS Deep Cast

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P16

Event #: 43

Ship: TULLY

UTC Date (dd|mmm|yyyy): 10 | Jun | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH₄ DIF	PH	UCL				
1	275	2007	2.847	Bot 10	✓ 3686	✓	✓	✓		✓	✓	✓				
2	276	2015	2.711	3500	✓ 3501					✓						
3	277	2032	2.717	3500	✓ 3501			✓								
4	278	2035	2.413	3000	✓ 3001							✓				
5	279	3109	1.876	2500	✓ 2500						✓					
6	280	2064	1.296	2000	✓ 2000							✓				
7	281	2087	0.488	1500	✓ 1500		✓					✓				
8	282	2099	0.261	1250	✓ 1249							✓				
9	283	3018	0.271	1000	✓ 999							✓				
10	284	3034	0.363	800	✓ 800							✓				
11	285	3038	0.586	600	✓ 600							✓				
12	286	3040	1.394	400	✓ 400							✓				
13	287	3052	2.526	300	✓ 299							✓				
14	288	3055	3.213	250	✓ 250											
15	289	3057	4.253	200	✓ 200							✓				
16	290	3075	4.932	175	✓ 174											
17	291	3098	5.747	150	✓ 150	✓						✓				
18	292	1492	6.505	125	✓ 125											
19	293	3124	6.971	100	✓ 100							✓				
20	294	3164	7.123	75	✓ 75											
21	295	3171	7.324	50	✓ 50							✓				
22	296	3203	6.982	25	✓ 25							✓				
23	297	1497	6.711	10	✓ 10							✓				
24	298	2055	6.671	5	✓ 5	✓	✓	✓		✓	✓					

Watchkeeper(s):
RY

Bottom Depth: 3635 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2148	1448
Bottom	2233	1533
End	2343	1643

Positional Information		
Start	Lat: <u>48</u> ° <u>16.95</u>	<u>N</u>
	Lon: <u>134</u> ° <u>40.07</u>	<u>W</u>
Bottom	Lat: <u>49</u> ° <u>16.99</u>	<u>N</u>
	Lon: <u>134</u> ° <u>40.15</u>	<u>W</u>
End	Lat: <u>49</u> ° <u>17.00</u>	<u>N</u>
	Lon: <u>134</u> ° <u>40.06</u>	<u>W</u>

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008

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

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

17 291 589 5.754 150 Not-Red Oxy-Blue Box

Water Properties Group

④ UBC DEEP CAST Rosette Log

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

Cruise ID: 2009-09

Station: P16

Event #: 45

Ship: TULLY

UTC Date (dd|mmm|yyyy): 11 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken							Comments				
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	NO₃⁻	NO₂⁻		Pb	Si	Fe	
1	299			2000	✓	2000		✓				✓					
2	300			2000	✓												
3	301				✓												
4	302				✓												
5	303				✓												
6	304				✓												
7	305				✓												
8	306				✓												
9	307				✓												
10	308				✓												
11	309			2000	✓												
12	310			2000	✓												
13	311			500	✓			✓			✓	✓					
14	312			500	✓												
15	313				✓												
16	314				✓												
17	315				✓												
18	316				✓												
19	317				✓												
20	318				✓												
21	319				✓												
22	320				✓												
23	321			500	✓												
24	322			500	✓												

Watchkeeper(s): 29

Bottom Depth: 3635 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	<u>0201</u>	<u>2001</u>
Bottom	<u>0327</u>	<u>2027</u>
End	<u>0354</u>	<u>2054</u>

Positional Information

Start	Lat: <u>49 ° 16.98</u>	N
	Lon: <u>134 ° 39.93</u>	W

▼

Bottom	Lat: <u>49 ° 16.98</u>	N
	Lon: <u>134 ° 39.94</u>	W

▼

End	Lat: <u>49 ° 17.01</u>	N
	Lon: <u>134 ° 39.88</u>	W

Oxygen Info For This Cast

Blank Value:	_____ mL · L ⁻¹
Std Value:	_____ mL · L ⁻¹
*Date Run:	____ ____ ____
Analyst:	_____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

⑤ UBC Shallow Cast Rosette Log

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

Cruise ID: 2009-09

Station: P16

Event #: 47

Ship: TULLY

UTC Date (dd|mmm|yyyy): 11 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	506			
1	323			1000	✓		✓	✓			✓			
2	324			1000	✓									
3	325				✓									
4	326				✓									
5	327				✓									
6	328				✓									
7	329				✓									
8	330				✓									
9	331				✓									
10	332				✓									
11	333			1000	✓									
12	334			1000	✓									
13	335			10	✓		✓			✓				
14	336			10	✓									
15	337			10	✓									
16	338			10	✓									
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): 24

Bottom Depth: 3836 m

Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		<u>0447</u>	<u>2147</u>
Bottom		<u>0500</u>	<u>2200</u>
End		<u>0513</u>	<u>2213</u>

Positional Information
 Start
 Lat: 49 ° 17.01 N
 Lon: 134 ° 39.98 W

Bottom
 Lat: 49 ° 16.96 N
 Lon: 134 ° 39.87 W

End
 Lat: 49 ° 16.90 N
 Lon: 134 ° 39.85 W

Oxygen Info For This Cast
 Blank Value: _____ mL · L⁻¹
 Std Value: _____ mL · L⁻¹
 *Date Run: ____ | ____ | ____
 Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P20

Event #: 56

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy DHS	Nut	Sal HPLC	Chl a	NH ₄ OMSP		DAHPM		ONAR		
1	342			600	✓ 600							✓				
2	343			300	✓ 300							✓				
3	344			200	✓ 200	✓	✓			✓						
4	345			175	✓ 174	✓	✓			✓						
5	346			150	✓ 150							✓				
6	347			100	✓ 100	✓	✓		✓	✓						
7	348			75	✓ 76	✓	✓		✓							
8	349			75	✓ 76							✓				
9	350		46	1%	✓ 46							✓				
10	351			50	✓ 50	✓	✓		✓			✓				
11	352			40	✓ 40	✓	✓		✓							
12	353			30	✓ 30	✓	✓		✓							
13	354		22	10%	✓ 27							✓				
14	355			25	✓ 25	✓	✓	✓	✓							
15	356			20	✓ 20	✓	✓		✓	✓						
16	357			15	✓ 15	✓	✓		✓							
17	358		8	30%	✓ 8							✓				
18	359			10	✓ 10	✓	✓	✓	✓							
19	360		4	55%	✓ 4							✓				
20	361			5	✓ 5									✓		
21	362			5	✓ 5	✓	✓	✓	✓	✓						
22	363			0	✓ 2	✓	✓		✓	✓						
23	364		0	100%	✓ 2							✓				
24																

Watchkeeper(s):

Bottom Depth: 3966 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0113	1813
Bottom	0122	1822
End	0152	1852

Positional Information

Start	Lat: 49 ° 34.03	N
	Lon: 138 ° 39.99	W
▼		
Bottom	Lat: 49 ° 34.03	N
	Lon: 138 ° 39.99	W
▼		
End	Lat: 49 ° 34.01	N
	Lon: 138 ° 39.94	W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Nuts - yellow

Water Properties Group

② 100 Deep Cast
Rosette Log

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

Cruise ID: 2009-09

Station: P20

Event #: 58

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | Jun | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	PH DIL	PH		UOE	OII		
1	365	2007	3.238	Bot-10	✓ 4026	✓	✓	✓		✓	✓		✓	✓		
2	366	2015	✓	3500	✓ 7500	✓	✓	✓		✓	✓		✓	✓		
3	367	2032	3.037	3500	✓ 3500											* TITRATION FAILED SWITCHED TO 950
4	368	2035	2.566	3000	✓ 3000								✓			
5	369	3109	2.059	2500	✓ 2500						✓					
6	370	2064	1.285	2000	✓ 2001								✓	✓		
7	371	2087	0.510	1500	✓ 1500								✓			
8	372	2099	0.272	1250	✓ 1250								✓			
9	373	3018	0.293	1000	✓ 1000								✓	✓		
10	374	3034	0.334	800	✓ 800								✓			
11	375	3038	0.413	600	✓ 600								✓			
12	376	3040	1.159	400	✓ 400		✓						✓			
13	377	3052	1.961	300	✓ 300								✓			
14	378	3055	3.383	250	✓ 250									✓		
15	379	3057	3.071	200	✓ 199								✓			
16	380	3075	3.468	175	✓ 174											
17	381	3098	4.394	150	✓ 150	✓							✓			
18	382	1492	5.540	125	✓ 125											
19	383	3124	7.039	100	✓ 100								✓	✓		
20	384	3164	7.267	75	✓ 74											
21	385	3171	7.346	50	✓ 50								✓	✓		
22	386	3203	7.699	25	✓ 25								✓	✓		
23	387	1497	7.127	10	✓ 10								✓	✓		
24	388	2055	6.927	5	✓ 5	✓	✓	✓		✓	✓			✓		

Watchkeeper(s):

DY

Bottom Depth: 3962 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0255	1955
Bottom	0342	2042
End	0459	2159

Positional Information

Start
Lat: 49° 34.01 N
Lon: 138° 39.91 WBottom
Lat: 49° 33.97 N
Lon: 138° 39.95 WEnd
Lat: 49° 33.98 N
Lon: 138° 39.92 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008

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

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

* 376 76 4.4103 400
391 3098
Should be 381 A
150 m NOT 376A & 400 m

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P20 Event #: 61 Ship: TULLY UTC Date (dd|mmm|yyyy): 12 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DO	PO ₄	NO ₃	
1	389			2000	☒		☒							
2	390			2000	☒									
3	391				☒									leaky
4	392				☒									
5	393				☒									
6	394				☒									
7	395				☒									
8	396				☒									
9	397				☒									
10	398				☒									
11	399			2000	☒									
12	400			2000	☒						☒			
13	401			500			☒							
14	402			500										
15	403													
16	404													
17	405													
18	406													
19	407													
20	408													
21	409													
22	410													
23	411			500										
24	412			500							☒			

Watchkeeper(s):
TEAM HUGHBottom Depth: 3967 mTransmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0806	
Bottom	0835	
End	0906	

Positional Information
Start
Lat: 49 ° 34.08 N
Lon: 138 ° 39.82 WBottom
Lat: 49 ° 34.03 N
Lon: 138 ° 39.82 WEnd
Lat: 49 ° 33.98 N
Lon: 138 ° 39.85 WOxygen Info For This Cast
Blank Value: _____ mL · L⁻¹
Std Value: _____ mL · L⁻¹
*Date Run: ____ | ____ | ____
Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P20 Event #: 62 Ship: TULLY UTC Date (dd|mmm|yyyy): 12 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	U&C GASES			
1	413			1000	✓		✓	✓			✓			
2	414			1000	✓									
3	415				✓									
4	416				✓									
5	417				✓									
6	418				✓									
7	419				✓									
8	420				✓									
9	421				✓									
10	422				✓									
11	423			1000	✓									
12	424			1000	✓						✓	✓		
13	425			10			✓							
14	426			10										
15	427			10										
16	428			10							✓	✓		
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): TEAM HUGH

Bottom Depth: 3967 m

Transmissio Cleaned: (Y) / N

Time	UTC	Local
Start	1047	
Bottom	1101	
End	1116	

Positional Information

Start	Lat: <u>49 ° 34 07</u>	N
	Lon: <u>138 ° 39 89</u>	W

Bottom	Lat: <u>49 ° 34 10</u>	N
	Lon: <u>138 ° 39 80</u>	W

End	Lat: <u>49 ° 34 07</u>	N
	Lon: <u>138 ° 39 81</u>	W

Oxygen Info For This Cast

Blank Value:	_____ mL · L ⁻¹
Std Value:	_____ mL · L ⁻¹
*Date Run:	____ ____ ____
Analyst:	_____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

CTD to 500 m
Rosette Log

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

Cruise ID: 2009-09 Station: Mooring Event #: 65 Ship: Tully UTC Date (dd|mmm|yyyy): 14 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken											Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	pH		DON				
1	429			30	✓ 30		✓	✓	✓		✓		✓				
2	430			20	✓ 20		✓	✓	✓		✓		✓				
3	431			10	✓ 10		✓	✓	✓		✓		✓				
4	432			5	✓ 5		✓	✓	✓		✓		✓				
5	433			0	✓ 2		✓	✓	✓		✓		✓				
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): DY

Bottom Depth: 4218 m

Transmisso Cleaned: Y / N

	UTC	Local
Time Start	0506	2206
Bottom	0513	2213
End	0525	2225

Positional Information

Start Lat: 50 ° 07.97 N
Lon: 144 ° 50.13 W

Bottom Lat: 50 ° 08.01 N
Lon: 144 ° 50.07 W

End Lat: 50 ° 8.06 N
Lon: 144 ° 50.12 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: | |

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P26 Event #: 71 Ship: TULLY UTC Date (dd|mmm|yyyy): 14 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	CHL DIC	NH ₄ ALK	PH		UCL	Other		
1	434	2007	3.500	Bot-10	✓ 4320	✓	✓	✓	✓	✓	✓		✓	✓		
2	435	2015	3.268	4000	✓	✓	✓	✓	✓	✓	✓		✓	✓		
3	436	2032	2.962	3500	✓	✓	✓	✓	✓	✓	✓		✓	✓		
4	437	2035	2.547	3000	✓	✓	✓	✓	✓	✓	✓		✓	✓		
5	438	3109	2.002	2500	✓	✓	✓	✓	✓	✓	✓		✓	✓		
6	439	2064	1.262	2000	✓	✓	✓	✓	✓	✓	✓		✓	✓		
7	440	2087	0.550	1500	✓	✓	✓	✓	✓	✓	✓		✓	✓		
8	441	2099	0.354	1250	✓	✓	✓	✓	✓	✓	✓		✓	✓		
9	442	3018	0.333	1000	✓	✓	✓	✓	✓	✓	✓		✓	✓		
10	443	3034	0.446	800	✓	✓	✓	✓	✓	✓	✓		✓	✓		
11	444	3038	0.523	600	✓	✓	✓	✓	✓	✓	✓		✓	✓		
12	445	3040	1.072	400	✓	✓	✓	✓	✓	✓	✓		✓	✓		
13	446	3052	1.604	300	✓	✓	✓	✓	✓	✓	✓		✓	✓		
14	447	3055	2.302	250	✓	✓	✓	✓	✓	✓	✓		✓	✓		
15	448	3057	3.301	200	✓	✓	✓	✓	✓	✓	✓		✓	✓		
16	449	3075	3.884	175	✓	✓	✓	✓	✓	✓	✓		✓	✓		
17	450	3098	4.904	150	✓	✓	✓	✓	✓	✓	✓		✓	✓		
18	451	1492	6.312	125	✓	✓	✓	✓	✓	✓	✓		✓	✓		
19	452	3124	7.084	100	✓	✓	✓	✓	✓	✓	✓		✓	✓		
20	453	3164	7.285	75	✓	✓	✓	✓	✓	✓	✓		✓	✓		
21	454	3171	7.284	50	✓	✓	✓	✓	✓	✓	✓		✓	✓		
22	455	3203	7.293	25	✓	✓	✓	✓	✓	✓	✓		✓	✓		
23	456	1497	6.998	10	✓	✓	✓	✓	✓	✓	✓		✓	✓		
24	457	2055	6.970	5	✓	✓	✓	✓	✓	✓	✓		✓	✓		

Watchkeeper(s): HUGH & TEAN

Bottom Depth: 4251 m

Transmisso Cleaned: (Y) / N

	UTC	Local
Time Start	1220	0520
Bottom	1321	0621
End	1445	

Positional Information

Start Lat: 50 ° 00.01 N

Lon: 144 ° 59.94 W

Bottom Lat: 50 ° 00.04 N

Lon: 144 ° 59.98 W

End Lat: 50 ° 00.06 N

Lon: 145 ° 00.02 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: 14 / 06 / 09

Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008

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

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

447 76 2.293 250
OXY - BLUE BOT

NUTS - RED BACH

Water Properties Group

② Light / OMA
Rosette Log

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

Cruise ID: 2009-09

Station: P26

Event #: 74

Ship: TULLY

UTC Date (dd|mmm|yyyy): 14 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄		DAW		OMA		
1	458			600	✓	✓						✓				
2	459			500	✓	✓								✓		
3	460			300	✓	✓						✓				
4	461			250	✓	✓								✓		
5	462			200	✓	✓								✓		1738
6	463			175	✓	✓								✓		1746
7	464			150	✓	✓								✓		1808
8	465			150	✓	✓						✓				
9	466			75	✓	✓						✓				
10	467			1%	✓	46 ✓						✓				50°00.01
11	468			1%	✓	46 ✓	✓	✓	✓							145°00.04
12	469			10%	✓	27 ✓	✓	✓	✓							50°00.02
13	470			10%	✓	27 ✓						✓				145°00.10
14	471			30%	✓	8 ✓	✓	✓	✓			✓				
15	472			30%	✓	8 ✓	✓	✓	✓							→ DID NOT CLOSE
16	473			55%	✓	4 ✓	✓	✓	✓							50°00.08
17	474			55%	✓	4 ✓						✓				145°00.08
18	475			100%	✓	0 ✓						✓				
19	476			100%	✓	0 ✓	✓	✓	✓							
20																
21																
22																
23																
24																

Watchkeeper(s):
TEAM HUGH

Bottom Depth: 4251 m

Transmisso Cleaned: (Y) N

Time	UTC	Local
Start 1739	1649	
Bottom 1746	1659	
End 1808	1722	

Positional Information
Start
Lat: 49°50' 51.00" N
Lon: 145° 00' 17.04" WBottom
50
Lat: 49° 59.94" N
Lon: 144° 59.96" WEnd
145
Lat: 49°50' 51.94" N
Lon: 145° 00' 05" WOxygen Info For This Cast
Blank Value: _____ mL · L⁻¹
Std Value: _____ mL · L⁻¹
*Date Run: ____ | ____ | ____
Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P26

Event #: 75

Ship: TULLY

UTC Date (dd|mmm|yyyy): 14 | June | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy Dm ³	Nut	Sal HPLC	Chl a	NH ₄ DMSPH 1% 10	ONAR					
1	477			200	✓ 200	✓	✓			✓						
2	478			175	✓ 175	✓	✓			✓						
3	479			125	✓ 124							✓				
4	480			100	✓ 100							✓				
5	481			100	✓ 100	✓	✓		✓	✓						
6	482			75	✓ 75	✓	✓		✓							
7	483			75	✓ 75							✓				
8	484			50	✓ 50							✓				
9	485			50	✓ 50	✓	✓		✓							
10	486			40	✓ 40	✓	✓		✓							
11	487			30	✓ 30	✓	✓		✓							
12	488			30	✓ 30							✓				
13	489			25	✓ 25	✓	✓	✓	✓							
14	490			20	✓ 20	✓	✓		✓	✓						
15	491			15	✓ 15	✓	✓		✓							
16	492			10	✓ 10	✓	✓	✓	✓							
17	493			5	✓ 5	✓	✓	✓	✓	✓						JVC
18	494			5	✓ 5							✓				
19	495			0	✓ 2	✓	✓		✓	✓						
20																
21																
22																
23																
24																

Watchkeeper(s):

Bottom Depth: 41250 m

Transmisso Cleaned: Y / N

	UTC	Local
Start	2020	1326
Bottom	2023	1323
End	2040	1340

Positional Information

Start
Lat: 49 ° 59.93 N
Lon: 145 ° 0.13 WBottom
Lat: 49 ° 59.94 N
Lon: 145 ° 0.17 WEnd
Lat: 49 ° 59.95 N
Lon: 145 ° 0.26 W

Oxygen Info For This Cast

Blank Value: mL · L⁻¹Std Value: mL · L⁻¹

*Date Run: | |

Analyst:

* Oxygen blanks and standards should be run daily, if possible

Nuts-Blue

Water Properties Group

Ⓡ Deep ONAr
Rosette Log

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

Cruise ID: 2009-09 Station: P26 Event #: 76 Ship: TULLY UTC Date (dd|mmm|yyyy): 14 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation			Samples Taken										Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ✓	Pressure	Oxy	Nut	Sal	Chl a	NH ₄		ONAr	0.5			
1	496			4000	✓	4001							✓				
2	497			4000	✓	4001		✓									
3	498			3500	✓	3499		✓									
4	499			3000	✓	2999		✓									
5	500			3000	✓	2998							✓				
6	501			2500	✓	2499		✓									
7	502			2000	✓	1999		✓									
8	503			2000	✓	1999							✓				
9	504			1000	✓	1001		✓									
10	505			1000	✓	1001							✓				
11	506			5									✓				Crashed!
12	507			5										✓			#77
13				5													
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s):
DY DG

Bottom Depth: 4250 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2218	1518
Bottom	2304	1604
End		

Positional Information
Start Lat: 49 ° 59.98 N
Lon: 144 ° 59.96 W

Bottom Lat: 49 ° 59.98 N
Lon: 145 ° 0.11 W

End Lat: ° See log! N
Lon: ° W

Oxygen Info For This Cast
Blank Value: _____ mL • L⁻¹
Std Value: _____ mL • L⁻¹
*Date Run: ____ | ____ | ____
Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P26

Event #: 79

Ship: TULLY

UTC Date (dd|mmm|yyyy): 15 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed √ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	508			100	✓ 100											
2	509			75	✓ 75											
3	510			50	✓ 50											
4	511			30	✓ 30											
5	512			20	✓ 20											
6	513			10	✓ 10											
7	514			5	✓ 5											
8	515			0	✓ 1.6											
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): DP

Bottom Depth: 4250 m

Transmissio Cleaned: Y / N

	UTC	Local
Start	0233	1923
Bottom	0235	1935
End	0245	1945

Positional Information

Start
 Lat: 49 ° 59.97 N
 Lon: 145 ° 0.02 W

Bottom
 Lat: 49 ° 59.97 N
 Lon: 145 ° 0.02 W

End
 Lat: 50 ° 0.00 N
 Lon: 144 ° 59.99 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09

Station: P26

Event #: 80

Ship: TULLY

UTC Date (dd|mmm|yyyy): 15 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation			Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓	Pressure	Oxy	Nut	Sal	Chl a	NH ₄			ONAR	017		
1	516			30	✓	30								✓			
2	517			30	✓	30									✓		
3	518			20	✓	21								✓			
4	519			20	✓	21									✓		
5	520			10	✓	10								✓			
6	521			5	✓	5								✓			
7	522			0	✓	2								✓			
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): DY

Bottom Depth: 4250 m

Transmissio Cleaned: Y / N

	Time	UTC	Local
Start		0503	2203
Bottom		0504	2204
End		0509	2209

Positional Information

Start

Lat: 49 ° 59.97 N

Lon: 145 ° 0.06 W

Bottom

Lat: 49 ° 59.9 N

Lon: 145 ° 0.06 W

End

Lat: 49 ° 59.9 N

Lon: 145 ° 0.06 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-09 Station: P26 Event #: 81 Ship: TULLY UTC Date (dd|mmm|yyyy): 15 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄		UBC				
1	523			2000	✓		✓					✓				
2	524			2000	✓											
3	525				✓											
4	526				✓											
5	527				✓											
6	528				✓											
7	529				✓											
8	530				✓											
9	531				✓											
10	532				✓											
11	533			2000	✓											
12	534			2000	✓											
13	535			500	✓		✓					✓				
14	536			500	✓											
15	537				✓											
16	538				✓											
17	539				✓											
18	540				✓											
19	541				✓											
20	542				✓											
21	543				✓											
22	544				✓											
23	545			500	✓											
24	546			500	✓											

Watchkeeper(s): HUGIT

Bottom Depth: 4250 m

Transmisso Cleaned: (Y) / N

	UTC	Local
Start	<u>0707</u>	
Bottom	<u>0735</u>	
End	<u>0804</u>	

Positional Information

Start

Lat: 50 ° 00 . 01 N

Lon: 145 ° 00 . 09 W

Bottom

Lat: 50 ° 00 . 01 N

Lon: 145 ° 00 . 09 W

End

Lat: 49 ° 59 . 99 N

Lon: 145 ° 00 . 06 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

⑧ UBC Shallow Cast
Rosette Log

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

Cruise ID: 2009-09 Station: P26 Event #: 82 Ship: TULLY UTC Date (dd|mmm|yyyy): 15 | 06 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	UBC	DAVIN		
1	547			1000	✓		✓				✓			UBC
2	548			1000	✓									
3	549				✓									
4	550				✓									
5	551				✓									
6	552				✓									
7	553				✓									
8	554				✓									
9	555				✓									
10	556				✓									
11	557			1000	✓									
12	558			1000	✓									
13	559			46	✓							✓		UBC
14	560			27	✓							✓		
15	561			10	✓		✓	✓			✓			
16	562			10	✓			✓						
17	563			10	✓		✓	✓						
18	564			10	✓			✓						
19	565			8	✓							✓		
20	566			4	✓							✓		
21	567			0	✓							✓		
22	568			46	✓									
23	569			46	✓									
24	570			46	✓									

Watchkeeper(s):
H.M./K.M/O.GBottom Depth: 4250 mTransmisso Cleaned: (Y) N

Time	UTC	Local
Start	<u>0854</u>	
Bottom	<u>0909</u>	
End		

Positional Information

Start
Lat: 50 ° 00.03 N
Lon: 145 ° 00.00 WBottom
Lat: 50 ° 00.05 N
Lon: 144 ° 59.92 WEnd
Lat: ° N
Lon: ° W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

*Oxygen blanks and standards should be run daily, if possible

Water Properties Group

CALIBRATION CAST
Rosette Log

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

Cruise ID: 2009-09Station: P22Event #: 91Ship: TULLYUTC Date (dd|mmm|yyyy): 16 | 6 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	DO DIC	NO₃ pH	Sal	Chl a	NO₂ NH ₄						
1	575			2000	☒	✓✓✓		✓								
2	576			2000	☒	✓✓✓										
3	577				☒	✓✓✓										
4	578				☒	✓✓✓										
5	579				☒	✓✓✓										
6	580				☒		✓✓									
7	581				☒		✓✓									
8	582				☒		✓✓✓									Badly cocked
9	583				☒		✓✓✓									
10	584				☒		✓✓✓									
11	585				☒		✓✓✓									
12	586				☒											
13	587				☒											
14	588				☒											
15	589				☒											
16	590				☒											
17	591				☒											
18	592				☒											
19	593				☒											
20	594				☒											
21	595				☒											
22	596			2000	☒											
23	597			2000	☒											
24	598			5				✓	✓	✓						

Watchkeeper(s):
DRYBottom Depth: 3880 mTransmisso Cleaned: (Y) / N

	UTC	Local
Start	2138	1438
Bottom	2201	1501
End	2227	1527

Positional Information

Start
Lat: 49 ° 42.02 N
Lon: 140 ° 40.02 WBottom
Lat: 49 ° 42.02 N
Lon: 140 ° 40.02 WEnd
Lat: 49 ° 42.02 N
Lon: 140 ° 39.98 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

* Oxygen blanks and standards should be run daily, if possible