

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P1 Event #: 1 Ship: TULLY UTC Date (dd/mmm/yyyy): 4 / 6 / 11

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

Watchkeeper(s): H.M.

Bottom Depth: 134 m
Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	1617	1017
Bottom	1620	
End	1625	

Positional Information
Start Lat: 48 ° 34. 44 N
Lon: 125 ° 30. 10 W

Bottom Lat: 48 ° 34. 46 N
Lon: 125 ° 30. 11 W

End Lat: 48 ° 34. 46 N
Lon: 125 ° 30. 14 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

1 15 2 3 4 12 5 13 6 7 8 9 10 14 11 ✓

① DMS cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P2 Event #: 2 Ship: TULLY UTC Date (dd|mmm|yyyy): 4 | June | 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments		
			Target Pressure	Confirmed Pressure	DMSP	Nut	Sal	DMSP d	DMSP e	CHL	HPLC	Flask Serial #	Value mL · L ⁻¹			
15		3	100	✓	100	✓	✓		✓	✓	✓					
2	2	4	75	✓		✓	✓✓				✓					
3	3	5	50	✓		✓	✓				✓					
4	4	6	40	✓		✓	✓				✓					
5	6	7	30	✓		✓	✓				✓					
6	8	8	25	✓		✓	✓				✓					
7	9	9	20	✓		✓✓	✓		✓✓	✓✓	✓					Closed in air, no water
8	10	10	15	✓		✓✓	✓		✓✓	✓✓	✓✓					
9	11	11	10	✓		✓	✓				✓					
10	12	12	5	✓		✓	✓		✓	✓	✓					
11	14	13	0			✓	✓		✓	✓	✓					
12	5	14	MAX+10	✓	40							✓✓				
13	7	15	MAX	✓	30							✓✓				
14	13	16	5	✓	5							✓✓				
15					107											tripped but not used
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): DY

Bottom Depth: 117 m

Transmisso Cleaned: (Y) / N

	UTC	Local
Start	2035	1335
Bottom	2037	1337
End	2056	1356

Positional Information

Start Lat: 48 ° 35.87 N
Lon: 125 ° 59.76 W

Start

Bottom Lat: 48 ° 35.86 N
Lon: 125 ° W

Bottom

End Lat: 48 ° 35.88 N
Lon: 125 ° 59.73 W

End

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: 2011-26 Station: P2 Event #: 4 Ship: TULLY UTC Date (dd|mmm|yyyy): 4 | JUNE | 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	MA/LS	DIC	PH/KJ	KIEL		Flask Serial #	Value mL · L ⁻¹	
1	1	17	Bot-10	✓ 107	✓	✓	✓	✓	✓	✓			2068	2.297	7.4
2	2	18	100	✓	✓	✓	✓	✓	✓	✓	✓		1144	2.682	7.5
3	3	19	75	✓	✓	✓	✓	✓	✓	✓			631	4.983	8.0
4	4	20	75	✓	✓	✓	✓	✓	✓	✓			468	4.988	8.1
5	5	21	50	✓	✓	✓	✓	✓	✓	✓	✓		1475	5.533	8.5
6	6	22	25	✓	✓	✓	✓	✓	✓	✓	✓		1248	7.119	11.1 BUBBLE ON LENS
7	7	23	10	✓	✓	✓	✓	✓	✓	✓			3028/1397	7.788	12.2 / 12.2
8	8	24	5	✓	✓	✓	✓	✓	✓	✓			1373	7.588	12.9
9															
10															
11	7	23	10										1397	7.791	12.2
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Watchkeeper(s):
DY / MRBottom Depth: 117 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2135	1435
Bottom	2138	1438
End	2147	1447

Positional Information
Start
Lat: 48 ° 35.93 N
Lon: 125 ° 59.76 WBottom
Lat: 48 ° 35.94 N
Lon: 125 ° 59.77 WEnd
Lat: 48 ° 36.01 N
Lon: 125 ° 59.85 WOxygen Info For This Cast
Blank Value: 0.0037 mL · L⁻¹
Std Value: 0.7267 mL · L⁻¹
*Date Run: 5 | 5 | 11
Analyst: H.M.

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

OFF - BLUE BOT

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P3 Event #: 5 Ship: TULLY UTC Date (dd|mmm|yyyy): 4 | June | 2011

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	HPCC					
1	25			MAX	✓ 25		✓		✓		✓✓					
2	26			5	5		✓	✓	✓		✓✓					
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): DY

Bottom Depth: 802 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	2321	1621
Bottom	2335	1635
End	2351	1651

Positional Information
Start Lat: 48 ° 37.50 N
Lon: 126 ° 19.80 W

Bottom Lat: 48 ° 37.47 N
Lon: 126 ° 19.76 W

End Lat: 48 ° 37.47 N
Lon: 126 ° 19.65 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

① IOS Deep Cast OXY: white Box
Rosette Log

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

Cruise ID: 2011-26 Station: P4 Event #: 6 Ship: TULLY UTC Date (dd mmm/yyyy): 45 6 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments		
			Target Pressure	Confirmed Pressure	Oxy MR	Nut ⁺ Froz	Sal SM	MR NOT cool	DIC KS	pH KJ	VOL	K12	Flask Serial #	Value mL • L ⁻¹			
1	1	27	Bot-10	✓	1320	✓	✓	✓	✓	✓	✓			3.9	1298	0.503	
2	2	28	1250	✓		✓	✓	✓✓	✓	✓✓	✓			4.0	2014	0.399	
3	3	29	1250	✓		✓	✓✓	✓	✓✓		✓	✓		4.0	1408	0.343	top valve open
4	4	30	1000	✓		✓	✓	✓	✓		✓✓	✓	✓	4.6	1307	0.235	
5	5	31	800	✓		✓✓	✓	✓	✓		✓	✓		5.2 5.4	3206/1392	0.227	
6	6	32	600	✓		✓	✓	✓	✓		✓	✓	✓	5.7	3090	0.394	
7	7	33	400	✓		✓	✓	✓	✓		✓✓	✓		—	1404	—	No trip
8	8	34	300	✓		✓	✓	✓			✓	✓		6.7	3126	1.409	
9	9	35	250	✓		✓	✓	✓			✓			7.0	1378	1.686	
10	10	36	200	✓		✓	✓	✓			✓	✓		7.3	647	2.344	
11	11	37	175	✓		✓	✓	✓			✓			7.5	3157	2.859	
12	12	38	150	✓		✓	✓	✓			✓	✓		7.9	621	3.057	didn't trip - went back
13	13	39	125	✓		✓	✓✓	✓			✓✓			8.0	1261	3.353	
14	14	40	100	✓		✓	✓	✓			✓	✓		8.2	1146	4.224	
15	15	41	75	✓		✓✓	✓	✓			✓			8.2 8.3	528/371	6.253	
16	16	42	50	✓		✓	✓	✓			✓	✓		8.8	196	6.470	
17	17	43	25	✓		✓	✓	✓			✓	✓	✓	9.9	569	7.013	
18	18	44	10	✓		✓	✓	✓			✓	✓		12.0	3182	6.541	
19	19	45	5	✓		✓	✓	✓		✓	✓			12.7	1374	6.423	
20																	
21																	
22		31	800											5.4	1392	0.224	
23		41	75											8.3	371	6.255	
24																	

Watchkeeper(s): DY

Bottom Depth: 1312 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0129	1830
Bottom	0154	1854
End	0239	1939

Positional Information
Start
Lat: 48 ° 38.98 N
Lon: 126 ° 39.88 W

Bottom
Lat: 48 ° 38.91 N
Lon: 126 ° 39.83 W

End
Lat: 48 ° 38.91 N
Lon: 126 ° 39.90 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 = WHITE BOX

② C₅ #1

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P4 Event #: 10 Ship: TULLY UTC Date (dd|mmm|yyyy): 5 June 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken									Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal							Flask Serial #	Value mL · L ⁻¹	
1	1	46	1000	✓												
2	2	47	1000	✓												
3	3	48	1000	✓												
4	4	49	1000	✓												
5	5	50	1000	✓												
6	6	51	1000	✓												
7	7	52	800	✓												DID NOT CLOSE
8	8	53	800	✓												
9	9	54	800	✓												
10	10	55	800	✓												
11	11	56	800	✓												
12	12	57	800	✓												
13	13	58	600	✓												
14	14	59	600	✓												
15	15	60	600	✓												
16	16	61	600	✓												
17	17	62	600	✓												
18	18	63	600	✓												
19	19	64	400													
20	20	65	400													
21	21	66	400													
22	22	67	400													
23	23	68	400													
24	24	69	400													

Watchkeeper(s): RY JS

Bottom Depth: 1326 m
Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	<u>0400</u>	<u>2100</u>
Bottom	<u>0419</u>	<u>2119</u>
End	<u>0443</u>	<u>2143</u>

Positional Information
Start
Lat: 48 ° 38.95 N
Lon: 126 ° 40.59 W

Bottom
Lat: 48 ° 38.96 N
Lon: 126 ° 40.56 W

End
Lat: 48 ° 38.02 N
Lon: 126 ° 40.54 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: 2011-26 Station: P4 Event #: 11 Ship: TULLY UTC Date (dd mmm yyyy): 5 June 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Nut	U8C				Flask Serial #	Value mL · L ⁻¹	
1	1	70	1300	✓											
2	2	71	1300	✓											
3	3	72	1300	✓											
4	4	73	1300	✓											
5	5	74	1300	✓		✓	✓	✓	✓						
6	6	75	1300	✓											
7	7	76	1000	✓											DID NOT CLOSE
8	8	77	1000	✓											
9	9	78	1000	✓											
10	10	79	1000	✓		✓	✓	✓	✓						
11	11	80	1000	✓											
12	12	81	1000	✓											
13	13	82	500	✓											
14	14	83	500	✓											
15	15	84	500	✓		✓	✓	✓	✓						
16	16	85	500	✓											
17	17	86	500	✓											
18	18	87	500	✓											
19	19	88	10	✓		✓	✓								
20	20	89	10	✓											
21	21	90	10	✓											
22	22	91	10	✓											
23	23	92	10	✓											
24	24	93	10	✓											

Watchkeeper(s): PY f

Bottom Depth: 1326 m

Transmisso Cleaned: (Y) 1 N

Time	UTC	Local
Start	0534	2234
Bottom	0558	2258
End	0626	2326

Positional Information

Start
Lat: 48 ° 38.82 N
Lon: 126 ° 40.94 W

Bottom
Lat: 48 ° 38.93 N
Lon: 126 ° 41.13 W

End
Lat: 48 ° 38.99 N
Lon: 126 ° 41.15 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: 2011-26 Station: PA Event #: 13 Ship: TULLY UTC Date (dd mmm/yyyy): 5 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Tha	Po						Flask Serial #	Value mL · L ⁻¹	
1	1	94	500	✓					✓								
2	2	95	500	✓				✓									
3	3	96	400	✓					✓								
4	4	97	300	✓				✓									
5	5	98	300	✓					✓								
6	6	99	200	✓				✓									
7	7	100	200	✓					✓								NO TRIP
8	8	101	150	✓				✓									
9	9	102	150	✓					✓								
10	10	103	100	✓				✓									
11	11	104	100	✓					✓								
12	12	105	75	✓				✓									
13	13	106	75	✓					✓								
14	14	107	50	✓				✓									
15	15	108	50	✓					✓								
16	16	109	30	✓				✓									
17	17	110	30	✓					✓								
18	18	111	20	✓				✓									
19	19	112	20	✓					✓								
20	20	113	10	✓				✓									
21	21	114	10	✓					✓								
22	22	115	0	✓				✓									
23	23	116	MAX	✓					✓								
24	24	117	MAX	✓				✓									

Watchkeeper(s): A.M.Bottom Depth: 1332 mTransmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	<u>0957</u>	
Bottom	<u>1001</u>	
End		

Positional Information

Start
Lat: 48 ° 39.11 N
Lon: 126 ° 40.80 WBottom
Lat: 48 ° 39.05 N
Lon: 126 ° 40.90 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

⑤ C₂ #2

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P4 Event #: 14 Ship: TULLY UTC Date (dd|mmm|yyyy): 5|6|11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal								Flask Serial #	Value mL · L ⁻¹	
1	1	118	300	✓													
2	2	119	300	✓													
3	3	120	300	✓													
4	4	121	300	✓													
5	5	122	300	✓													
6	6	123	300	✓													
7	7	124	200	✓													
8	8	125	200	✓													
9	9	126	200	✓													
10	10	127	200	✓													
11	11	128	200	✓													
12	12	129	200	✓													
13	13	130	100	✓													
14	14	131	100	✓													
15	15	132	100	✓													
16	16	133	100	✓													
17	17	134	100	✓													
18	18	135	100	✓													
19	19	136	0	✓													
20	20	137	0	✓													
21	21	138	0	✓													
22	22	139	0	✓													
23	23	140	0	✓													
24	24	141	0	✓													

Watchkeeper(s): H. J.

Bottom Depth: 1320 m
Transmisso Cleaned: (Y) I N

Time	UTC	Local
Start	1210	0510
Bottom	1214	
End	1224	

Positional Information
Start
Lat: 48 ° 38.93 N
Lon: 126 ° 40.02 W

Bottom
Lat: 48 ° 38.92 N
Lon: 126 ° 39.99 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

⑥ LIGHT CAST

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P4 Event #: 15 Ship: TULLY UTC Date (dd|mmm|yyyy): 5 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken			Oxygen Titrations		Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Flask Serial #	Value mL · L ⁻¹	
1	1	142	1%	✓ 72						
2	2	143	5%	✓ 38						
3	3	144	9%	✓ 25						
4	4	145	17%	✓ 17						
5	5	146	30%	✓ 9						
6	6	147	55%	✓ 4						
7	7	148	100%	✓ 0						
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Watchkeeper(s): AM.

Bottom Depth: 1325 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1314	
Bottom	1317	
End		

Positional Information
Start
Lat: 48° 39.11 N
Lon: 126° 40.47 W

Bottom
Lat: 48° 39.05 N
Lon: 126° 40.43 W

End
Lat: 48° 39.05 N
Lon: 126° 40.41 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

⑦ DMS CAST

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P4

Event #: 16

Ship: TULLY

UTC Date (dd mmm yyyy): 5 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy DMS	Nut	Sal	DMS t-d	CHL	HPAC	Phylo		Flask Serial #	Value mL · L ⁻¹	
1	1	149	200	✓	✓	✓		✓							TOP VALVE OPEN
2	2	150	175	✓	✓	✓		✓							
3	3	151	100	✓	✓	✓		✓	✓						TOP VALVE OPEN
4	4	152	75	✓	✓	✓			✓						
5	5	153	50	✓	✓	✓			✓						
6	7	154	40	✓	✓	✓			✓						
7	9	155	30	✓	✓	✓			✓						
8	10	156	25	✓	✓	✓			✓						
9	11	157	20	✓	✓	✓		✓	✓						
10	12	158	15	✓	✓	✓			✓						
11	13	159	10	✓	✓	✓			✓						
12	14	160	5	✓	✓	✓		✓	✓						
13	16	161	0	✓	✓	✓		✓	✓						NO TRIP
14	8	162	MAX-10	✓						✓					
15	6	163	MAX	✓						✓					
16	15	164	5	✓						✓	✓				
17															
18															
19															
20															
21															
22															
23															
24															

Watchkeeper(s): AM

Bottom Depth: 1300 m

Transmissio Cleaned: (Y) (N)

Time	UTC	Local
Start	1505	0805
Bottom	1510	
End	1528	

Positional Information

Start
Lat: 48° ° 39.17 N
Lon: 126° ° 40.00 W

Bottom
Lat: 48° ° 39.18 N
Lon: 126° ° 40.01 W

End
Lat: 48° ° 39.19 N
Lon: 126° ° 40.30 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: 2011-16 Station: PS Event #: 17 Ship: TULLY UTC Date (dd|mmm|yyyy): 5 | 6 | 11

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	H ₂ O ₂					
1	165			MAX	☒ 55		☒		☒		☒					
2	166			5	☒ 5		☒	☒	☒		☒					
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H.M. ↓ DY ↑

Bottom Depth: 2081 m
Transmisso Cleaned: Y / N

	UTC	Local
Time Start	1823	1123
Bottom	1856	1156
End	1934	1234

Positional Information
Start Lat: 48 ° 41.47 N
Lon: 127 ° 10.08 W

Bottom Lat: 48 ° 41.47 N
Lon: 127 ° 10.00 W

End Lat: 48 ° 41.53 N
Lon: 127 ° 9.96 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: 2011-26 Station: P6 Event #: 18 Ship: Tully UTC Date (dd|mmm|yyyy): 5 | June | 2011

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL * L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	AM ₄				
1	167			MAX	☒	45	☒		☒	☒				
2	168			5	☒	5	☒	☒	☒	☒				
3														
4														
5														
6														
7														
8														
9														
10														
11														
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13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): DY

Bottom Depth: 2545 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2220	1520
Bottom	2258	1558
End	2336	1636

Positional Information

Start

Lat: 48 ° 44.66 N

Lon: 127 ° 40.04 W

Bottom

Lat: 48 ° 44.68 N

Lon: 127 ° 40.41 W

End

Lat: 48 ° 44.67 N

Lon: 127 ° 40.66 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: 2011-26 Station: P7 Event #: 19 Ship: Tully UTC Date (dd|mmm|yyyy): 6 | June | 2011

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				
1	169			Max	☒ 40		☒		☒	☒				
2	170			5	☒ 5		☒	☒	☒	☒				
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
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17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): DY

Bottom Depth: 2503 m
Transmisso Cleaned: ☒ / N

Time	UTC	Local
Start	0233	1933
Bottom	0309	2009
End	0348	2048

Positional Information
Start
Lat: 48 ° 46.54 N
Lon: 128 ° 10.00 W

Bottom
Lat: 48 ° 46.58 N
Lon: 128 ° 10.03 W

End
Lat: 48 ° 46.57 N
Lon: 128 ° 10.09 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: 2011-26 Station: P8Event #: 21Ship: TULLYUTC Date (dd mmm yyyy): 6 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments	
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	CHK	HP/LC	UOL	KIEL			Flask Serial #	Value mL · L ⁻¹			
1	1	171	2000	✓	✓	✓	✓	✓			✓				2.6	1298	1.523	
2	2	172	1500	✓	✓	✓	✓	✓			✓	✓			3.0	2014	0.811	
3	3	173	1250	✓	✓	✓	✓	✓			✓				3.4	1408/1307-3.5	0.480	
4	4	174	1000	✓	✓	✓	✓	✓			✓				3.9	3206	0.281	
5	5	175	800	✓	✓	✓	✓	✓			✓	✓			4.4	1392	0.291	
6	6	176	600	✓	✓	✓	✓	✓			✓				4.9	3090	0.462	
7	7	177	400	✓	✓	✓	✓	✓			✓				5.5	1404	1.352	BUBBLE on LENS
8	8	178	300	✓	✓	✓	✓	✓			✓				6.3	3126	1.446	
9	9	179	250	✓	✓	✓	✓	✓							6.5	1378	1.931	
10	10	180	200	✓	✓	✓	✓	✓			✓				6.7	647	2.847	
11	11	181	175	✓	✓	✓	✓	✓							7.0	3157	3.173	
12	12	182	150	✓	✓	✓	✓	✓			✓				7.3	621	3.081	
13	13	183	125	✓	✓	✓	✓	✓							7.7	1261	3.522	
14	14	184	100	✓	✓	✓	✓	✓	✓		✓				7.8	1146	4.853	
15	15	185	75	✓	✓	✓	✓	✓	✓						8.0	528	6.299	
16	16	186	50	✓	✓	✓	✓	✓	✓		✓				8.6	371	6.817	
17	17	187	25	✓	✓	✓	✓	✓	✓		✓	✓			10.8/10.8	196/569	6.746	
18	20	188	10	✓	18	✓	✓	✓	✓		✓				11.2	3182	6.575	
19	21	189	5		23	✓	✓	✓	✓						11.1	1374	6.501	
20	17	190	MAX/O		44/20					✓								
21	18	191	MAX		34/21						✓							
22	22	192	5		22						✓	3	173	1250	3.5	1307	0.520	0.520
23												19	187	25	10.8	569	6.764	
24																		

Watchkeeper(s): H.M.Bottom Depth: 2515 mTransmisso Cleaned: (Y) N

Time	UTC	Local
Start	0706	1206
Bottom	0735	
End	0824	

Positional Information

Lat: 48 ° 49.16 N

Lon: 128 ° 40.12 W

Start

Lat: 48 ° 49.03 N

Lon: 128 ° 40.26 W

Bottom

Lat: 48 ° 48.97 N

Lon: 128 ° 40.28 W

End

Oxygen Info For This Cast

Blank Value: 0.0023 mL · L⁻¹

Std Value: 0.7160 mL · L⁻¹

*Date Run: 7 6 11

Analyst: H.M.

* 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: 2011-26 Station: P9 Event #: 22 Ship: TULLY UTC Date (dd|mmm|yyyy): 6 | 6 | 11

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	HPIC			
1	193			MAY	60		✓		✓		✓✓			
2	194			5	5		✓	✓	✓		✓✓			
3														
4														
5														
6														
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20														
21														
22														
23														
24														

Watchkeeper(s): N M

Bottom Depth: 2338 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1103	0408
Bottom	1138	
End	1213	

Positional Information

Start
 Lat: 48 ° 51.33 N
 Lon: 129 ° 10.01 W

Bottom
 Lat: 48 ° 51.36 N
 Lon: 129 ° 10.03 W

End
 Lat: 48 ° 51.36 N
 Lon: 129 ° 10.14 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: 2011-26 Station: P 10 Event #: 23 Ship: TULLY UTC Date (dd|mmm|yyyy): 6 | 6 | 11

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL * L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NP40						
1	195			max	☒ 39		☒		☒	☒						
2	196			5	☒ 5		☒	☒	☒	☒						
3																
4																
5																
6																
7																
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21																
22																
23																
24																

Watchkeeper(s): H.N.

Bottom Depth: 2641 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1500	0800
Bottom	1528	
End	1603	

Positional Information
Start
Lat: 48 ° 53.55 N
Lon: 129 ° 40.04 W

Bottom
Lat: 48 ° 53.55 N
Lon: 129 ° 40.52 W

End
Lat: 48 ° 53.63 N
Lon: 129 ° 40.60 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: 2011-26 Station: P11 Event #: 24 Ship: Tully UTC Date (dd|mmm|yyyy): 6 | June | 2011

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						
1	197			Max	☒ 55		☒		☒		☒	☒					
2	198			5	☒ 5		☒	☒	☒		☒	☒					
3																	
4																	
5																	
6																	
7																	
8																	
9																	
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13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s):
DY

Bottom Depth: 2750 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1900	1200
Bottom	1941	1241
End	2016	1316

Positional Information
Start Lat: 48 ° 55.91 N
Lon: 130 ° 9.95 W

Bottom Lat: 48 ° 55.87 N
Lon: 130 ° 10.10 W

End Lat: 48 ° 55.88 N
Lon: 130 ° 10.17 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: 2011-26 Station: P12Event #: 25Ship: TULLYUTC Date (dd mmm/yyyy): 6 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Qty DM>	Nut	DM>	DMSP Ed	Tos CHL	HPLC	DB CHL	DB HPLC	Flask Serial #	Value mL · L ⁻¹	
1	1	199	200	✓	✓	✓		✓							NISKIN LEAKING BAD!
2	2	200	175	✓	✓	✓		✓							
3	3	201	100	✓	✓	✓		✓	✓						
4	5	202	75	✓	✓	✓			✓						
5	8	203	50	✓	✓	✓			✓						
6	10	204	40	✓	✓	✓			✓						
7	12	205	30	✓	✓	✓			✓						
8	13	206	25	✓	✓	✓			✓						
9	14	207	20	✓	✓	✓		✓	✓						
10	16	208	15	✓	✓	✓			✓						LEAKY SPIGOT
11	18	209	10	✓	✓	✓			✓						
12	19	210	5	✓	✓	✓		✓	✓						
13	22	211	0		✓	✓		✓	✓						
14	7	212	MAX 10	✓	55					✓					
15	9	213	MAX	✓	45					✓					
16	21	214	5	✓	5					✓					
17	4	215	1%	✓	90						4	4	1	1	
18	6	216	5%	✓	65						2	2		1	
19	11	217	9%	✓	40						4	4	1	1	
20	15	218	17%	✓	20						2	2		1	
21	17	219	30%	✓	15						4	4	1	1	
22	20	220	55%	✓	5						2	2		1	
23	23	221	100%		0						4	4	1	1	
24															

Watchkeeper(s): BYBottom Depth: 32 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2001	1601
Bottom	2306	1606
End	2333	1633

Positional Information

Start
Lat: 48 ° 58.10 N
Lon: 130 ° 40.02 WBottom
Lat: 48 ° 58.11 N
Lon: 130 ° 40.04 WEnd
Lat: 48 ° 58.20 N
Lon: 130 ° 40.31 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

② Deep Cast
Rosette Log

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

Cruise ID: 2011-26 Station: P12 Event #: 27 Ship: TULLY UTC Date (dd mmm/yyyy): 07 JUN 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy MR	Nut NO ₃	Sal	UNT Cool	DIC K ₂	pH K ₂	UBE	K ₁₀₂		t°C	Flask Serial #	Value mL · L ⁻¹	
1	1	222	Bot-10	✓	3270	✓	✓	✓	✓	✓	✓	✓		2.1	2068	2.307	
2	2	223	3000	✓		✓	✓	✓	✓	✓	✓	✓		2.1	1144	2.288	BUBBLE on LENS
3	3	224	3000	✓		✓	✓	✓	✓	✓	✓	✓		2.1	631	2.290	
4	4	225	2500	✓		✓	✓	✓	✓	✓	✓	✓		2.3	468	1.909	
5	5	226	2000	✓		✓	✓	✓	✓	✓	✓	✓		2.6	1475	1.400	
6	6	227	1500	✓		✓	✓	✓	✓	✓	✓	✓		2.9	1248	0.619	
7	7	228	1250	✓		✓	✓	✓	✓	✓	✓	✓		3.3	3028	0.351	
8	8	229	1000	✓		✓	✓	✓	✓	✓	✓	✓		3.7	1397	0.267	
9	9	230	800	✓		✓	✓	✓	✓	✓	✓	✓		4.4	1373	0.248	
10	10	231	600	✓		✓	✓	✓	✓	✓	✓	✓		4.8	3151	0.443	
11	11	232	400	✓		✓	✓	✓	✓	✓	✓	✓		5.5	1318	1.165	
12	12	233	300	✓		✓	✓	✓	✓	✓	✓	✓		5.9	745	1.906	
13	13	234	250	✓		✓	✓	✓	✓	✓	✓	✓		6.1	2020	2.492	
14	14	235	200	✓		✓	✓	✓	✓	✓	✓	✓		6.5	1300	2.906	
15	15	236	175	✓		✓	✓	✓	✓	✓	✓	✓		6.7	1395	3.354	
16	16	237	150	✓		✓	✓	✓	✓	✓	✓	✓		6.9	1321	3.645	
17	17	238	125	✓		✓	✓	✓	✓	✓	✓	✓		7.1/9.2	1406/1407	4.277	1407 = 4.278
18	18	239	100	✓		✓	✓	✓	✓	✓	✓	✓		7.2	1476	5.256	
19	19	240	75	✓		✓	✓	✓	✓	✓	✓	✓		7.4	1123	6.615	
20	20	241	50	✓		✓	✓	✓	✓	✓	✓	✓		8.1	1330	7.122	
21	21	242	25	✓		✓	✓	✓	✓	✓	✓	✓		9.9	1411	6.754	
22	22	243	10	✓		✓	✓	✓	✓	✓	✓	✓		10.1	650	6.703	
23	23	244	5	✓		✓	✓	✓	✓	✓	✓	✓		10.1	3124	6.701	
24																	

Watchkeeper(s):
DY (me)Bottom Depth: 3275 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0059	1759
Bottom	0201	1901
End	0320	2020

Positional Information

Start
Lat: 48 ° 58.63 N
Lon: 130 ° 40.69 WBottom
Lat: 48 ° 59.00 N
Lon: 130 ° 41.46 WEnd
Lat: 48 ° 59.16 N
Lon: 130 ° 42.58 W

Oxygen Info For This Cast

Blank Value: 0.0023 mL · L⁻¹
Std Value: 0.7160 mL · L⁻¹
*Date Run: 7 | 6 | 11
Analyst: A.M.

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

③ ④ Th + Po Cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P12

Event #: 31

Ship: TULLY

UTC Date (dd:mmm:yyyy): 7 June 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	TH	PO			Flask Serial #	Value mL · L ⁻¹	
1	1	245	500	✓					✓					
2	2	246	500	✓				✓						
3	3	247	400	✓					✓					
4	4	248	300	✓				✓						
5	5	249	300	✓					✓					
6	6	250	200	✓				✓						
7	7	251	200	✓					✓					
8	8	252	150	✓				✓						
9	9	253	150	✓					✓					
10	10	254	100	✓				✓						
11	11	255	100	✓					✓					
12	12	256	75	✓				✓						
13	13	257	75	✓					✓					
14	14	258	50	✓				✓						
15	15	259	50	✓					✓					
16	18	260	30	✓				✓						
17	19	261	30	✓					✓					
18	20	262	20	✓				✓						
19	21	263	20	✓					✓					
20	22	264	10	✓				✓						
21	23	265	10	✓					✓					
22	24	266	0					✓						
23	16	267	MAX	✓					✓					
24	17	268	MAX	✓				✓						

Watchkeeper(s): RY

Bottom Depth: 2994 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	<u>0500</u>	<u>2200</u>
Bottom	<u>0510</u>	<u>2210</u>
End	<u>0532</u>	<u>2232</u>

Positional Information

Start

Lat: 48 ° 58.78 N

Lon: 130 ° 43.04 W

Bottom

Lat: 48 ° 58.72 N

Lon: 130 ° 43.05 W

End

Lat: 48 ° 58.56 N

Lon: 130 ° 43.09 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

1 - 15 23 24 16 17 ... 22

(A) (B) UBC Cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P12

Event #: 33

Ship: TULLY

UTC Date (dd|mmm|yyyy): 7|6|2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken					Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut ☒ 2002	Sal	Nut ☒ cool	UBC	Flask Serial #	Value mL · L ⁻¹	
1	1	269	2000									
2	2	270	2000									
3	3	271	2000									
4	4	272	2000									
5	5	273	2000			✓	✓	✓	✓			
6	6	274	2000									
7	7	275	1000									
8	8	276	1000									
9	9	277	1000									
10	10	278	1000									
11	11	279	1000			✓	✓	✓	✓			
12	12	280	1000									
13	13	281	500									
14	14	282	500									
15	15	283	500									
16	16	284	500									
17	17	285	500			✓	✓	✓	✓			
18	18	286	500									
19	19	287	10									
20	20	288	10									
21	21	289	10									
22	22	290	10									
23	23	291	10			✓	✓		✓			
24	24	292	10									

Watchkeeper(s): dy

Bottom Depth: 2994 m

Transmisso Cleaned: ✓ 1 N

Time	UTC	Local
Start	<u>0631</u>	<u>2331</u>
Bottom		
End	<u>0739</u>	

Positional Information

Start
Lat: 48 ° 58.32 N
Lon: 130 ° 43.56 W

Bottom
Lat: ° N
Lon: ° W

End
Lat: 48 ° 58.30 N
Lon: 130 ° 43.60 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: 2011-26 Station: P 13 Event #: 35 Ship: Tully UTC Date (dd|mmm|yyyy): 7 | 6 | 11

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 HPLC				
1	293			MAX	☒	43	☒		☒	☒				
2	294			5	☒	5	☒	☒	☒	☒				
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): H.M.

Bottom Depth: 2991 m

Transmisso Cleaned: ☒ / N

Time	UTC	Local
Start	1318	0618
Bottom	1350	
End	1420	

Positional Information

Start
 Lat: 49 ° 02.57 N
 Lon: 131 ° 39.90 W

Bottom
 Lat: 49 ° 02.71 N
 Lon: 131 ° 40.00 W

End
 Lat: 49 ° 02.76 N
 Lon: 131 ° 40.47 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: 2011-26 Station: P14 Event #: 36 Ship: TULLY UTC Date (dd|mmm|yyyy): 7 | 6 | 11

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					
20	295			MAX	☒	50		☒		☒		☒					Top valve not closed.
32	296			5	☒			☒	☒	☒		☒					
3																	
4	~			1000	☒												for seth
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): DY S R

Bottom Depth: 3318 m

Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	1927	1227
Bottom	2001	
End	2039	

Positional Information
Start Lat: 49 ° 7.27 N
Lon: 132 ° 39.88 W

Bottom Lat: 49 ° 07.22 N
Lon: 132 ° 39.90 W

End Lat: 49 ° 07.25 N
Lon: 132 ° 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: 2011-26 Station: P15 Event #: 37 Ship: Tully UTC Date (dd|mmm|yyyy): 8 | 6 | 11

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	TPC			
1	297			ch max	☒ 50		☒		☒		☒			
2	298			5	☒ 5		☒	☒	☒		☒			
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s):

Bottom Depth: 3410 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0148	1848
Bottom	0226	1926
End	0301	2001

Positional Information

Start Lat: 49 ° 11.98 N
Lon: 133 ° 39.89 W

Bottom Lat: 49 ° 11.90 N
Lon: 133 ° 40.17 W

End Lat: 49 ° 11.88 N
Lon: 133 ° 40.20 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

① UBC east

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P16 Event #: 40 Ship: TULLY UTC Date (dd|mmm|yyyy): 8 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Nut	UBC				Flask Serial #	Value mL · L ⁻¹	
				✓											
1	1	299	2000	✓											
2	2	300	2000	✓											
3	3	301	2000	✓											
4	4	302	2000	✓											
5	5	303	2000	✓		✓	✓	✓	✓						
6	6	304	2000	✓											
7	7	305	1000	✓											
8	8	306	1000	✓											
9	9	307	1000	✓											
10	10	308	1000	✓											
11	11	309	1000	✓		✓	✓	✓	✓						
12	12	310	1000	✓											
13	13	311	500	✓											
14	14	312	500	✓											
15	15	313	500	✓											
16	16	314	500	✓											
17	17	315	500	✓		✓	✓	✓	✓						
18	18	316	500	✓											
19	19	317	10	✓											
20	20	318	10	✓											
21	21	319	10	✓											
22	22	320	10	✓											
23	23	321	10	✓		✓	✓		✓						
24	24	322	10	✓											

Watchkeeper(s): H.M.

Bottom Depth: 3636 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0903	0203
Bottom	0929	
End	1002	

Positional Information		
Lat:	49 ° 17.00	N
Lon:	134 ° 40.15	W

Start

Bottom

End

Lat:	49 ° 17.02	N
Lon:	134 ° 40.34	W

Lat:	49 ° 17.06	N
Lon:	134 ° 40.24	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: 2011-26 Station: P16 Event #: 41 Ship: TULLY UTC Date (dd|mmm|yyyy): 8 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken					Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Th	Po	Flask Serial #	Value mL · L ⁻¹	
1		323	500	✓					✓			
2		324	500	✓				✓				
3		325	400	✓					✓			
4		326	300	✓				✓				
5		327	300	✓					✓			
6		328	200	✓				✓				
7		329	200	✓					✓			
8		330	150	✓				✓				
9		331	150	✓					✓			
10		332	100	✓				✓				
11		333	100	✓					✓			
12		334	75	✓				✓				
13		335	75	✓					✓			
14		336	50	✓				✓				
15		337	50	✓					✓			
16		338	30	✓				✓				
17		339	30	✓					✓			
18		340	20	✓				✓				
19		341	20	✓					✓			
20		342	10	✓				✓				
21		343	10	✓					✓			
22		344	0	✓				✓				
23		345	MAX	✓	60				✓			
24		346	MAX	✓	60			✓				

Watchkeeper(s): H.M.

Bottom Depth: 3367 m

Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		1247	0547
Bottom		1255	
End		1318	

Positional Information

Start
 Lat: 49 ° 16 . 95 N
 Lon: 134 ° 40 . 08 W

Bottom
 Lat: 49 ° 17 . 01 N
 Lon: 134 ° 40 . 17 W

End
 Lat: 49 ° 16 . 96 N
 Lon: 134 ° 40 . 35 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: 2011-26 Station: P16

Event #: 43

Ship: TULLY

UTC Date (dd|mmm|yyyy): 0 | 6 | 11

③ Deep cast

0.0101334
1000+P

Firing #	Niskin #	Sample #	Rosette Operation			Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure		Oxy MR	Nut R02	Sal KR	MR DOT COOL	KS DIC	PH KS	UCL	K12		Temp	Flask Serial #	Value mL · L ⁻¹	
1	1	347	Bot-10	✓	3682	X	X	X	X	X	X	X			1.9	559	2.717	
2	2	348	3500	✓		X	X	XX	X	XX	X				1.8	2088	2.679	
3	3	349	3500	✓		X	X	X	X		X				1.8	1491	2.678	
4	4	350	3000	✓		X	X		X		XX	X			1.9	3094	2.440	
5	5	351	2500	✓		XX	X		X		X		X		2.0 2.4	1487 1465	1.919 /	1.917
6	6	352	2000	✓		X	X		X		X	X			2.4	632	1.309	
7	7	353	1500	✓		X	X		X		X	X			2.9	552	0.499	
8	8	354	1250	✓		X	X		X		X	X			3.1	1175	0.326	
9	9	355	1000	✓		X	X		X		X	X	X		3.5	1496	0.277	
10	10	356	800	✓		X	X		X		X	X			4.0	1158	0.352	
11	11	357	600	✓		X	XX		XX		X	X			4.5	1483	0.575	
12	12	358	400	✓		X	X		X		X	X			5.1	1306	1.372	
13	13	359	300	✓		X	X				X	X			5.7	620	2.276	
14	14	360	250	✓		X	X				XX				5.7	1333	2.727	
15	15	361	200	✓		X	X				X	X			6.2	1105	3.618	
16	16	362	175	✓		X	X				X				6.3	1085	3.932	
17	17	363	150	✓		X	XX				X	X			6.7	611	4.231	
18	18	364	125	✓		X	X				XX				6.9	2090	4.621	
19	19	365	100	✓		XX	X				X	X			7.1 7.2	3121 510	5.852 /	5.857
20	20	366	75	✓		X	X				XX				7.2	1218	6.951	
21	21	367	50	✓		X	X				X	X			7.7	396	7.027	BUBBLE ON LENS
22	22	368	25	✓		X	X				X	X	X		9.2	505	6.735	
23	23	369	10	✓		X	X				X	X			9.3	2015	6.735	
24	24	370	5	✓		X	X	X		X	X				9.2	3119	6.754	Value open BUBBLE on

Watchkeeper(s): H.M.

Bottom Depth: 3636 m

Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	1359	0659
Bottom	1450	0750
End	1603	

Positional Information

Lat:	49° 16.93	N
Lon:	134° 40.58	W

Lat:	49° 16.06	N
Lon:	134° 40.99	W

Lat:	49° 16.95	N
Lon:	134° 41.34	W

Oxygen Info For This Cast

Blank Value:	0.0023	mL · L ⁻¹
Std Value:	0.716	mL · L ⁻¹
*Date Run:	10 6 11	
Analyst:	H.M.	

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

④ Light cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P16 Event #: 47 Ship: TULLY UTC Date (dd mmm yyyy): 8 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken									Oxygen Titrations		Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	DB CTK	DB HPLC	MP	FCM			Flask Serial #	Value mL · L ⁻¹	
1	1	371	1%	✓ 105				4	4	1	1					
2	2	372	5%	✓ 80				2	2		1					
3	3	373	9%	✓ 56				4	4	1	1					
4	4	374	17%	✓ 40				2	2		1					
5	5	375	30%	✓ 26				4	4	1	1					
6	6	376	55%	12				2	2		1					
7	7	377	100%	♡				4	4	1	1					
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): R.M.

Bottom Depth: 3636 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1725	1025
Bottom	1727	
End	1746	

Positional Information

Start Lat: 49 ° 17.04 N
Lon: 134 ° 40.85 W

Bottom Lat: 49 ° 17.02 N
Lon: 134 ° 40.81 W

End Lat: 49 ° 16.96 N
Lon: 134 ° 40.71 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

⑤ DMS cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-16 Station: P16 Event #: 48 Ship: TULLY UTC Date (dd|mmm|yyyy): 8 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	chl	MPD	DMS		Flask Serial #	Value mL · L ⁻¹	
1		378	200	✓	x	xx				x				
2		379	175	✓	x	x				x				
3		380	100	✓	x	x		x		x				
4		381	75	✓	x	x		x						
5		382	50	✓	x	x		x						
6		383	40	✓	x	x		x						
7		384	30	✓	x	x		xx						
8		385	25	✓	x	x		x						
9		386	20	✓	xx	x		x		xx				
10		387	15	✓	x	x		x						
11		388	10	✓	x	x		x						
12		389	5	✓	x	x		x		x				
13		390	0	✓	x	x		x		x				
14		391	MAX+10	✓					xx					
15		392	MAX	✓					xx					
16		393	5	✓					xx					
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): H.K.

Bottom Depth: 3636 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1755	1055
Bottom	1759	
End	1818	

Positional Information

Start

Lat: 49 ° 17.04 N

Lon: 134 ° 40.14 W

Bottom

Lat: 49 ° 16.98 N

Lon: 134 ° 40.14 W

End

Lat: 49 ° 17.01 N

Lon: 134 ° 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

Rosette Log

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

Cruise ID: 2011-26 Station: P17 Event #: 49 Ship: Tolly UTC Date (dd|mmm|yyyy): 8 | 6 | 2011

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	HAC					
1	394			Max	☒	60	☒		☒		☒					
2	395			5	☒	5	☒	☒	☒		☒					
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): AM

Bottom Depth: 3630 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	2222	1527
Bottom	2300	1600
End	2337	1637

Positional Information
 Start Lat: 49 ° 20.98 N
 Lon: 49 ° 20.93 W

Bottom Lat: 135 ° 40.08 N
 Lon: 135 ° 40.24 W

End Lat: 49 ° 20.97 N
 Lon: 135 ° 40.11 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: 2011-26 Station: P18 Event #: 50 Ship: Tully UTC Date (dd|mmm|yyyy): 9 | 6 | 2011

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	TPC		
1	396			Max	☒ 25		☒		☒		☒		
2	397			5			☒	☒	☒		☒		
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Watchkeeper(s): dy

Bottom Depth: 3838 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0341	2041
Bottom	0418	2118
End	0451	2151

Positional Information

Start Lat: 49 ° 26.05 N
Lon: 136 ° 40.00 W

Bottom Lat: 49 ° 26.11 N
Lon: 136 ° 39.79 W

End Lat: 49 ° 26.12 N
Lon: 136 ° 39.35 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: 2011-26 Station: P19 Event #: 51 Ship: Tully UTC Date (dd|mmm|yyyy): 9 | 6 | 11

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	MP			
1	398			Max	40		✓		✓		✓			BOTTLE #1 HUNG UP
2	399			5	5		✓	✓	✓		✓			LOADED ON WRONG SIDE OF POST
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): H.M.

Bottom Depth: 3930 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0927	0227
Bottom	0953	
End	1023	

Positional Information

Start Lat: 49 ° 30.06 N
Lon: 137 ° 40.04 W

Bottom Lat: 49 ° 29.96 N
Lon: 137 ° 39.89 W

End Lat: 49 ° 29.98 N
Lon: 137 ° 39.91 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

① Th + P₀ Cast
Rosette Log

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

Cruise ID: 2011-26 Station: P20 Event #: 52 Ship: TULLY UTC Date (dd mmm/yyyy): 9 / 6 / 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	σ _t	P ₀			Flask Serial #	Value mL · L ⁻¹	
1		400	500	✓				✓						
2		401	500	✓				✓						
3		402	400	✓					✓					
4		403	300	✓				✓						
5		404	300	✓					✓					
6		405	200	✓				✓						
7		406	200	✓					✓					
8		407	150	✓				✓						
9		408	150	✓					✓					
10		409	100	✓				✓						
11		410	100	✓					✓					
12		411	75	✓				✓						
13		412	75	✓					✓					
14		413	50	✓				✓						
15		414	50	✓					✓					
16		415	30	✓				✓						
17		416	30	✓					✓					
18		417	20	✓				✓						
19		418	20	✓					✓					
20		419	10	✓				✓						
21		420	10	✓					✓					
22		421	0	✓				✓						
23		422	MAX	✓					✓					
24		423	MAX	✓				✓						

Watchkeeper(s): H.M.

Bottom Depth: 3969 m
Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		1435	
Bottom		1441	
End		1501	

Positional Information
Start
Lat: 49 ° 33.85 N
Lon: 138 ° 40.13 W

Bottom
Lat: 49 ° 33.82 N
Lon: 138 ° 40.20 W

End
Lat: 49 ° 33.67 N
Lon: 138 ° 40.49 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

② Light cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P20 Event #: 54 Ship: TULLY UTC Date (dd|mmm|yyyy): 9 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	DO CHL	DO HPLC	MP	FCM	Flask Serial #	Value mL · L ⁻¹	
1		424	1%	☒ 70				4	4	1	1			
2		425	5%	☒ 50				2	2	0	1			
3		426	9%	☒ 34				4	4	1	1			
4		427	17%	☒ 22				2	2	0	1			
5		428	30%	☒ 15				4	4	1	1			
6		429	55%	☒ 8				2	2	0	1			
7		430	100%	☒ 0				4	4	1	1			
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): H.M.

Bottom Depth: 3970 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1549	0849
Bottom	1551	
End	1602	

Positional Information
Start
Lat: 49 ° 33.21 N
Lon: 138 ° 40.73 W

Bottom
Lat: 49 ° 33.23 N
Lon: 138 ° 40.76 W

End
Lat: 49 ° 33.30 N
Lon: 138 ° 40.85 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: 2011-26 Station: P20 Event #: 55 Ship: TULLY UTC Date (dd-mm-yyyy): 9 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments	
			Target Pressure	Confirmed Pressure	Oxy	Nut ρ_{102}	Sal	Nut cool	DL	PH	ORP	K102	Temp	Flask Serial #	Value mL · L ⁻¹			
1	1	431	Bot-10	✓	4024							X			1.7	2056	3.031	BOTTLES NOT WATERED (SHAKEN x 2?)
2	2	432	3500	✓				X		X					1.7	1386	2.880	
3	3	433	3500	✓							X				1.8	3061	2.269	
4	4	434	3000	✓		X						X	X		1.7 1.9	3178/1201	2.553/2.531	
5	5	435	2500	✓			X		X						2.0	1414	1.934	
6	6	436	2000	✓								X			2.2	1327	1.297	BUBBLE on LENS
7	7	437	1500	✓								X			2.6	3107	0.600	
8	8	438	1250	✓								X			2.9	1335	0.339	
9	9	439	1000	✓								X	X		3.3	1134	0.288	
10	10	440	800	✓								X			3.8	570	0.405	
11	11	441	600	✓								X			4.2	3118	0.478	
12	12	442	400	✓								X			4.9	2060	0.988	
13	13	443	300	✓								X			5.2	3135	1.666	
14	14	444	250	✓							X				5.5	1459	2.632	
15	15	445	200	✓		X						X			5.9/6.1	612/3116	3.118/3.115	
16	16	446	175	✓											6.1	3164	3.405	
17	17	447	150	✓								X			6.4	1460	3.784	BUBBLE on LENS
18	18	448	125	✓							X				6.6	2000	4.158	
19	19	449	100	✓			X					X			6.8	1302	5.079	
20	20	450	75	✓											6.6	1260	6.674	
21	21	451	50	✓								X			7.5	2075	7.131	
22	22	452	25	✓								X	X		8.6	3194	6.917	
23	23	453	10	✓								X			2.027	—		Did not close
24	24	454	5								X				8.9	1326	6.841	

Watchkeeper(s): H.M.Bottom Depth: 3969 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1619	0919
Bottom	1657	
End	1833	

Positional Information

Lat:	49 ° 33.87	N
Lon:	138 ° 40.08	W

Lat:	49 ° 34.05	N
Lon:	138 ° 40.18	W

Lat:	49 ° 34.07	N
Lon:	138 ° 40.22	W

Oxygen Info For This Cast

Blank Value:	0.0023 mL·L ⁻¹
Std Value:	0.716 mL·L ⁻¹
*Date Run:	10 6 11
Analyst:	H.M.

* 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: 2011-26

Station: P20

Event #: 60

Ship: TULLY

UTC Date (dd mmm/yyyy): 9 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy DMS	Nut Pars	Sal	DMS E-d	CHL	HPLC		Flask Serial #	Value mL · L ⁻¹	
1	1	455	200	✓	x	x		x						
2	2	456	175	✓	x	x		x						
3	3	457	100	✓	x	x		x	x					
4	4	458	75	✓	x	x			x					
5	5	459	50	✓	x	x			x					
6	7	460	40	✓	x	x			x					
7	9	461	30	✓	x	x			x					
8	10	462	25	✓	x	x			x					
9	11	463	20	✓	x	x		x	x					
10	12	464	15	✓	x	x			x					
11	13	465	10	✓	x	x			x					
12	14	466	5	✓	x	x		x	x					
13	16	467	0	✓	x	x		x	x					
14	8	468	MAX	✓ 40						x				
15	6	469	MAX	✓ 50						x				
16	15	470	5	✓ 5						x				
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s):

Bottom Depth: 3967 m

Transmisso Cleaned: 0/1 N

Time	UTC	Local
Start	2015	1315
Bottom	2019	1319
End	2036	1336

Positional Information

Start
Lat: 49 ° 34.17 N
Lon: 138 ° 40.16 W

Bottom
Lat: 49 ° 34.16 N
Lon: 138 ° 40.17 W

End
Lat: 49 ° 34.15 N
Lon: 138 ° 40.21 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

↓ 2 3 4 5 15 6 14 7 8 9 19 11 12 16 13

⑤ UBC CAST

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P20 Event #: 62 Ship: TULLY UTC Date (dd|mmm|yyyy): 9|6|11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut ☒	Sal	Nut local ☒	UBC ☒				Flask Serial #	Value mL · L ⁻¹	
1		471	2000	☒											
2		472	2000	☒											
3		473	2000	☒											
4		474	2000	☒											
5		475	2000	☒		☒	☒	☒	☒						
6		476	2000	☒											
7		477	1000	☒											
8		478	1000	☒											
9		479	1000	☒											
10		480	1000	☒											
11		481	1000	☒		☒	☒	☒	☒						
12		482	1000	☒											
13		483	500	☒											
14		484	500	☒											
15		485	500	☒											
16		486	500	☒											
17		487	500	☒		☒	☒	☒	☒						
18		488	500	☒											
19		489	10	☒											
20		490	10	☒											
21		491	10	☒											
22		492	10	☒											
23		493	10	☒		☒	☒		☒						
24		494	10	☒											

Watchkeeper(s):

Bottom Depth: 3967 m

Transmisso Cleaned: ☒ Y / N

	Time	UTC	Local
Start		2145	1445
Bottom		2222	1522
End		2257	1557

Positional Information

Start Lat: 49° 33.96 N
Lon: 138° 40.66 W

Bottom Lat: 49° 33.81 N
Lon: 138° 41.07 W

End Lat: 49° 33.66 N
Lon: 138° 41.33 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: 2011-26 Station: P24 Event #: 65 Ship: Tully UTC Date (dd|mmm|yyyy): 10 | 6 | 11

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	H ₂ CO ₃			
1	495			Max	☒ 40		☒		☒		☒			
2	496			5	☒ 5		☒	☒	☒		☒			
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): H.M.

Bottom Depth: 3959 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	0822	0122
Bottom	0856	
End	0919	

Positional Information
Start
Lat: 49 ° 38.00 N
Lon: 139 ° 40.14 W

Bottom
Lat: 49 ° 38.01 N
Lon: 139 ° 40.07 W

End
Lat: 49 ° 37.95 N
Lon: 139 ° 40.11 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: 2011-26 Station: P 22 Event #: 66 Ship: TULLY UTC Date (dd|mmm|yyyy): 10 | 6 | 11

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken											Comments
		Flask Serial #	Value mL * L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	MP4 HPLC							
1	497			MAY	☒ 60		☒		☒	☒							
2	498			0	☒ 5		☒	☒	☒	☒							
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): H.A.

Bottom Depth: 3897 m

Transmisso Cleaned: ☒ N

Time	UTC	Local
Start	1316	0616
Bottom	1343	
End	1409	

Positional Information

Start Lat: 49 ° 42.00 N
Lon: 140 ° 40.00 W

Bottom Lat: 49 ° 42.07 N
Lon: 140 ° 39.83 W

End Lat: 49 ° 42.05 N
Lon: 140 ° 39.82 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: 2011-26 Station: P 23 Event #: 67 Ship: TULLY UTC Date (dd|mmm|yyyy): 10 | 6 | 11

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 HPLC	DIC	PH		
1	499			2000	☒						3	3		
2	500			2000	☒						3	3		
3	501				☒						3	3		
4	502				☒						3	3		
5	503				☒						3	3		
6	504				☒									
7	505				☒									
8	506				☒									
9	507				☒									
10	508				☒									
11	509				☒									
12	510				☒									
13	511				☒									
14	512				☒									
15	513				☒									
16	514				☒									
17	515				☒									
18	516				☒									
19	517				☒									
20	518				☒									
21	519				☒									
22	520			2000	☒									
23	521			MAX	☒	78	☒		☒	☒				
24	522			5	☒	5	☒		☒	☒				

Watchkeeper(s): H.M./D.Y.

Bottom Depth: 4053 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	1808	1108
Bottom	1835	1135
End	1908	1208

Positional Information

Start
 Lat: 49 ° 46.00 N
 Lon: 141 ° 40.07 W

Bottom
 Lat: 49 ° 46.02 N
 Lon: 141 ° 39.99 W

End
 Lat: 49 ° 45.94 N
 Lon: 141 ° 40.06 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: 2011-26 Station: P24 Event #: 68 Ship: Tully UTC Date (dd|mmm|yyyy): 10 | 6 | 11

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					
1	523			Max	☒ 50		☒				☒					
2	524			5	☒ 5		☒	☒			☒					
3	525			5	☒ 5		☒									5L water for nutrient
4																
5					☒ 50											spare bottle
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): SM

Bottom Depth: 3990 m

Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	2304	1604
Bottom	2337	1637
End	0014	1714

Positional Information

Start Lat: 49 ° 50.18 N
Lon: 142 ° 39.95 W

Bottom Lat: 49 ° 50.22 N
Lon: 142 ° 39.69 W

End Lat: 49 ° 50.21 N
Lon: 142 ° 39.66 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: 2011-26 Station: P25 Event #: 69 Ship: Tully UTC Date (dd|mmm|yyyy): 11 | 6 | 11

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	HAC					
1	526			Max	☒ 45		☒		☒		☒					
2	527			5	☒ 5		☒		☒		☒					
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s):

Bottom Depth: 4139 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0402	2102
Bottom	0435	2135
End	0512	

Positional Information

Start Lat: 50 ° 0.04 N
Lon: 143 ° 36.20 W

Bottom Lat: 50 ° 0.04 N
Lon: 143 ° 36.28 W

End Lat: 50 ° 00.13 N
Lon: 143 ° 36.38 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: 2011-26 Station: P35 Event #: 70 Ship: Tolly UTC Date (dd|mmm|yyyy): 11 | 6 | 11

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			
1	528			Max	☒ 44		☒		☒		☒			
2	529			5	☒ 5		☒	☒	☒		☒			
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

Watchkeeper(s): A.M

Bottom Depth: 4153 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0757	0057
Bottom	0825	
End	0853	

Positional Information

Start Lat: 50 ° 00.02 N
Lon: 144 ° 18.23 W

Bottom Lat: 50 ° 00.06 N
Lon: 144 ° 18.15 W

End Lat: 50 ° 00.05 N
Lon: 144 ° 18.14 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

① Th + Po Cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: TRAPS-D

Event #: 71

Ship: TULLY

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

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Th	Po						Flask Serial #	Value mL · L ⁻¹	
1		530	500	✓					✓								
2		531	500	✓				✓									
3		532	400	✓					✓								
4		533	300	✓				✓									
5		534	300	✓					✓								
6		535	200	✓				✓									
7		536	200	✓					✓								
8		537	150	✓				✓									
9		538	150	✓					✓								
10		539	100	✓				✓									
11		540	100	✓					✓								
12		541	75	✓				✓									
13		542	75	✓					✓								
14		543	50	✓				✓									
15		544	50	✓					✓								
16		545	30	✓				✓									
17		546	30	✓					✓								
18		547	20	✓				✓									
19		548	20	✓					✓								
20		549	10	✓				✓									
21		550	10	✓					✓								
22		551	0	✓				✓									
23		552	MAX	✓	45				✓								
24		553	MAX	✓	45			✓									

Watchkeeper(s): H.7

Bottom Depth: 4225 m

Transmisso Cleaned: (Y) / N

	UTC	Local
Time		
Start	11 00	0400
Bottom	11 05	
End	11 22	

Positional Information

Start
Lat: 50 ° 00 .03 N
Lon: 144 ° 50.15 W

Bottom
Lat: 50 ° 00 .02 N
Lon: 144 ° 50.10 W

End
Lat: 50 ° 00 .01 N
Lon: 144 ° 50.06 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

② Light Cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26

Station: TRAPS D

Event #: 73

Ship: TULLY

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

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken					Oxygen Titrations					Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	CHL	HPLE	MP	FCM	C14	Flask Serial #	Value mL · L ⁻¹	
1		554	10%	✓ 83				4	4	1	1	5			
2		555	5%	✓ 52				2	2		1	5			
3		556	9%	✓ 24				4	4	1	1	5			
4		557	17%	✓ 16				2	2		1	5			
5		558	30%	✓ 9				4	4	1	1	5			
6		559	55%	✓ 5				2	2		1	5			
7		560	100%	✓ 0				4	4	1	1	5			
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Watchkeeper(s): 4.m.

Bottom Depth: 4231 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	1452	0752
Bottom	1455	
End	1504	

Positional Information

Start

Lat: 50 ° 00.54 N

Lon: 144 ° 52.38 W

Bottom

Lat: 50 ° 00.56 N

Lon: 144 ° 52.41 W

End

Lat: 50 ° 00.71 N

Lon: 144 ° 52.37 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: 2011-26 Station: PA-005 Event #: 75 Ship: TULLY UTC Date (dd|mmm|yyyy): 12 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken					Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	ONAN	DIC	UW DOC	UW SAL	
					UW			UW	UW			
1		561	250	✓						xx	x	
2		562	200	✓						xx	x	
3		563	150	✓						xx	x	
4		564	125	✓						xx	x	
5		565	100	✓						xx	x	
6		566	75	✓						xx	x	
7		567	50	✓						xx	x	
8		568	30	✓	✓✓			✓✓	✓	xx	x	
9		569	20	✓	✓✓			✓✓	✓✓	xx	x	
10		570	10	✓	✓✓			✓✓	✓	xx	x	
11		571	5	✓	✓✓			✓✓	✓	xx	x	
12		572	0		✓✓			✓✓	✓	xx	x	
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Watchkeeper(s): dy

Bottom Depth: 4220 m

Transmisso Cleaned: (Y) / N

	UTC	Local
Start	0044	1745
Bottom	0051	1751
End	0107	1807

Positional Information

Start

Lat: 50 ° 8.14 N

Lon: 144 ° 49.05 W

Bottom

Lat: 50 ° 8.10 N

Lon: 144 ° 48.92 W

End

Lat: 50 ° 8.27 N

Lon: 144 ° 48.66 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: 2011-26 Station: P26 Event #: 76 Ship: TULLY UTC Date (dd|mmm|yyyy): 12|6|11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal						Flask Serial #	Value mL • L ⁻¹	
1		573	1000	✓											
2		574	1000	✓											
3		575	1000	✓											
4		576	1000	✓											
5		577	1000	✓											
6		578	1000	✓											
7		579	800	✓											
8		580	800	✓											
9		581	800	✓											
10		582	800	✓											
11		583	800	✓											
12		584	800	✓											
13		585	600	✓											
14		586	600	✓											
15		587	600	✓											
16		588	600	✓											
17		589	600	✓											
18		590	600	✓											
19		591	400	✓											
20		592	400	✓											
21		593	400	✓											
22		594	400	✓											
23		595	400	✓											
24		596	400	✓											

Watchkeeper(s):

Bottom Depth: 4255 m
Transmisso Cleaned: Y N

Time	UTC	Local
Start	0236	1936
Bottom	0254	1954
End	0317	2017

Positional Information
Start
Lat: 50 ° 0.06 N
Lon: 145 ° 0.04 W

Bottom
Lat: 50 ° 0.11 N
Lon: 145 ° 0.10 W

End
Lat: 50 ° 0.14 N
Lon: 144 ° 59.90 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

Cs cast 2

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P26 Event #: 77 Ship: TULLY UTC Date (dd|mmm|yyyy): 12 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal						Flask Serial #	Value mL · L ⁻¹	
1		597	300	✓											
2		598	300	✓											
3		599	300	✓											
4		600	300	✓											
5		601	300	✓											
6		602	300	✓											
7		603	200	✓											
8		604	200	✓											
9		605	200	✓											
10		606	200	✓											
11		607	200	✓											
12		608	200	✓											
13		609	100	✓											
14		610	100	✓											
15		611	100	✓											
16		612	100	✓											
17		613	100	✓											
18		614	100	✓											
19		615	0												
20		616	0												
21		617	0												
22		618	0												
23		619	0												
24		620	0												

Watchkeeper(s):

Bottom Depth: 4258 m

Transmisso Cleaned: Y / N

	UTC	Local
Time Start	0400	2100
Bottom	0407	2107
End	0416	2116

Positional Information

Start Lat: 49 ° 59.94 N
Lon: 144 ° 59.95 W

Bottom Lat: 50 ° 0.00 N
Lon: 145 ° 0.00 W

End Lat: 49 ° 59.89 N
Lon: 145 ° 0.02 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

ONAN 2

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26

Station: P2G

Event #: 78

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken				Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	UW	Flask Serial #	Value mL · L ⁻¹	
1		621	30	✓	xx		x	xx			
2		622	20	✓	xx		x	xx			
3		623	10	✓	xx		x	xx			
4		624	5	✓	xx		x	xx			
5		625	0	✓	xx			xx			
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											

Watchkeeper(s): dy

Bottom Depth: 4257 m

Transmisso Cleaned: Y / N

	UTC	Local
Start	0456	2156
Bottom	0457	2157
End	0502	2202

Positional Information

Start

Lat: 49 ° 59.99 N

Lon: 145 ° 0.13 W

Bottom

Lat: 49 ° 59.99 N

Lon: 145 ° 0.15 W

End

Lat: 49 ° 59.98 N

Lon: 145 ° 0.22 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: 2011-26 Station: PA-004

Event #: 81

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken			Oxygen Titrations				Comments	
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Flask Serial #	Value mL · L ⁻¹				
1		626	30	✓	xx		x	xx	xx				
2		627	20	✓	xx		x	xx	x				
3		628	10	✓	xx		x	xx	x				
4		629	5	✓	xx		x	xx	x				
5		630	0	✓	xx			xx	x				
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Watchkeeper(s): H.M.

Bottom Depth: 4232 m

Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	1257	0551
Bottom	1255	
End	1302	

Positional Information

Start
Lat: 50 ° 02.72 N
Lon: 144 ° 52.72 WBottom
Lat: 50 ° 02.66 N
Lon: 144 ° 52.71 WEnd
Lat: 50 ° 02.66 N
Lon: 144 ° 52.71 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

Deep Cast
Rosette Log

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

Cruise ID: 2011-26

Station: P26

Event #: 82

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy H.M.	Nut	Sal H.M.	P.Y. Nut	M.R. DIC	M.R. Alk	C.M. UBC	CC	K.S. pH	K.R. T°	Flask Serial #	Value mL · L ⁻¹	
1	1	631	Bot 10	✓	4317	x	xx	x	x	x	x		x	1.4	2056	3.240	
2	2	632	4000	✓		x	xx	xx	5	xx	x		x	1.4	1386	3.208	
3	3	633	3500	✓		x	xx	x	x	x		x	xx	1.4	3061	2.938	
4	4	634	3000	✓		xx	xx	x	x	x	x		x	1.5 1.7	3178 1201	2.576	2.579
5	5	635	2500	✓		x	3	x	xx	x	x		x	1.7	1414	2.019	
6	6	636	2000	✓		x	xx	x	x	x	x		x	2.0	1327	1.321	
7	7	637	1500	✓		x	xx	x	x	x	x		x	2.4	3107	0.605	
8	8	638	1250	✓		x	xx	x	x	x	x		x	2.7	1335	0.410	
9	9	639	1000	✓		x	xx	x	5	x	x	x	x	3.1	1134	0.398	
10	10	640	800	✓		x	xxx	x	xx	x	x		xx	3.3	570	0.479	
11	11	641	600	✓		xx	xx	x	5	x	x	x	x	3.8 3.9	3118 2060	0.552	0.540
12	12	642	400	✓		x	xx	x	5	x	x	x	x	4.3	3135	1.110	
13	13	643	300	✓		x	xx	x		x	x	x	x	4.3	1459	1.612	
14	14	644	250	✓		x	6	x		x	x		x	4.4	612	2.034	
15	15	645	200	✓		x	xx	x		x	x	x	x	4.6	3116	2.704	
16	16	646	175	✓		x	xx	x		x	x		xx	4.8	3164	3.064	
17	17	647	150	✓		x	xx	x		x	x	x	x	5.1	1460	3.321	
18	18	648	125	✓		x	xx	x		x	x		x	5.2	2000	4.045	
19	19	649	100	✓		x	xx	x		x	x	x	x	5.5	1302	7.049	
20	20	650	75	✓		x	xx	x		x	x		xx	5.8	1260	7.116	
21	21	651	50	✓		x	3	x		x	x	x	x	7.0	2075	7.158	
22	22	652	25	✓		xx	xx	x		x	x	x	x	7.6 7.7	3194 2027	7.026	7.021
23	23	653	10	✓		x	6	x		x	x	x	x	7.7	1326	7.032	
24	24	654	5	✓		x	xx	x		x	x		x	7.7	1142	7.022	

Watchkeeper(s): H.M.

Bottom Depth: 4257 m

Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		1521	
Bottom		1615	
End		1732	

Positional Information

Start
Lat: 49 ° 59.92 N
Lon: 145 ° 00.00 W

Bottom
Lat: 49 ° 59.92 N
Lon: 145 ° 00.03 W

End
Lat: 49 ° 59.93 N
Lon: 145 ° 00.02 W

Oxygen Info For This Cast

Blank Value: 0.0023 mL · L⁻¹Std Value: 0.7157 mL · L⁻¹

*Date Run: 16 | 6 | 11

Analyst: H.M.

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

DMS cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26

Station: P26

Event #: 84

Ship: TULLY

UTC Date (dd|mmm|yyyy): 12 | Jun | 2011

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy DMS	Nut Rn2	Sal	DMS Ed	CHL	HPLC	ph-yto		Flask Serial #	Value mL · L ⁻¹	
1	1	655	200	✓		x	x		x						
2	2	656	175	✓		x	x		x						
3	3	657	100	✓		x	x		x	x					
4	4	658	75	✓		x	x		x						
5	5	659	50	✓		x	x		x						
6	7	660	40	✓		x	xx		x						
7	9	661	30	✓		x	x		x						
8	10	662	25	✓		x	x		x						
9	11	663	20	✓		xx	x		xx	x					
10	12	664	15	✓		x	x		x						
11	13	665	10	✓		x	x		xx						
12	14	666	5	✓		x	x		x	x					
13	16	667	0	✓		x	x		x	x					
14	6	668	MAX+10	✓						xx					
15	8	669	MAX	✓						xx					
16	15	670	5	✓						xx	xxx				
17															
18															
19															
20															
21															
22															
23															
24															

Watchkeeper(s): MR/DY

Bottom Depth: 4257 m

Transmisso Cleaned: Y / N

	UTC	Local
Start	2301	1601
Bottom	2306	1606
End	2323	1623

Positional Information

Start

Lat: 50 ° 00.16 N

Lon: 145 ° 00.71 W

Bottom

Lat: 50 ° 00.17 N

Lon: 145 ° 00.71 W

End

Lat: 50 ° 0.09 N

Lon: 145 ° 0.70 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

1, 2, 3, 4, 5, 14, 6, 15, 7, 8, 9, 10, 11, 12, 16, 13

ONAR 4

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P26Event #: 85Ship: TULLYUTC Date (dd|mmm|yyyy): 13 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments		
			Target Pressure	Confirmed ✓ Pressure	Oxy UW	Nut	Sal IOS		UW ONAR					Flask Serial #		Value mL • L⁻¹	
1		671	30	✓		xx		x		xx							
2		672	20	✓		xx		x		xx							
3		673	10	✓		xx		x		xx							
4		674	5	✓		xx		x		xx							
5		675	0	✓		xx		x		xx							
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): 84Bottom Depth: 4257 mTransmisso Cleaned: Y / N

	UTC	Local
Time		
Start	0036	1736
Bottom	0037	1737
End	0042	1742

Positional Information

Start
Lat: 50 ° 0.13 N
Lon: 144 ° 59.96 WBottom
Lat: 50 ° 0.12 N
Lon: 144 ° 59.98 WEnd
Lat: 50 ° 0.09 N
Lon: 145 ° 0.01 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

UBC cast

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P26Event #: 87Ship: TULLYUTC Date (dd|mmm|yyyy): 13 | 6 | 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut for	Sal	NUT cool	UBC			Flask Serial #	Value mL · L ⁻¹	
1		676	2000	✓										
2		677	2000	✓										
3		678	2000	✓										
4		679	2000	✓										
5		680	2000	✓		✓	✓	✓	✓					
6		681	2000	✓										
7		682	1000	✓										
8		683	1000	✓										
9		684	1000	✓										
10		685	1000	✓										
11		686	1000	✓		✓	✓	✓	✓					
12		687	1000	✓										
13		688	500	✓										
14		689	500	✓										
15		690	500	✓										
16		691	500	✓										
17		692	500	✓		✓	✓	✓	✓					
18		693	500	✓										
19		694	10	✓										
20		695	10	✓										
21		696	10	✓										
22		697	10	✓										
23		698	10	✓		✓	✓		✓					
24		699	10	✓										

Watchkeeper(s): DPBottom Depth: 4257 m

Transmisso Cleaned: Y / N

	UTC	Local
Start	0451	2151
Bottom	19528	2228
End	0607	2307

Positional Information

Start
Lat: 50 ° 0.03 N
Lon: 144 ° 59.79 WBottom
Lat: 50 ° 0.10 N
Lon: 144 ° 59.80 WEnd
Lat: 50 ° 0.11 N
Lon: 144 ° 59.80 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

Rosette Log

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

Cruise ID: 2011-26 Station: P26 Event #: 93 Ship: TULLY UTC Date (dd mmm yyyy): 13 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken					Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy UW	Nut	Sal UW	170 UW		Flask Serial #	Value mL · L ⁻¹	
1		700	200	☒	2		☒	2				
2		701	150	☒	2		☒	2				
3		702	100	☒	2		☒	2				
4		703	50	☒	2		☒	2				
5		704	10	☒	2			2				
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Watchkeeper(s):

Bottom Depth: 4257 m
Transmisso Cleaned: Y / N

	Time	UTC	Local
Start		1943	1243
Bottom		1946	1246
End		1955	

Positional Information
Start Lat: 50 ° 0.03 N
Lon: 144 ° 59.89 W

Bottom Lat: 50 ° 0.03 N
Lon: 144 ° 59.89 W

End Lat: 50 ° 0.10 N
Lon: 144 ° 59.92 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

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: ARGOS Event #: 97 Ship: TULCY UTC Date (dd|mmm|yyyy): 14 | 6 | 11

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							
1	705			max	☒ 40		☒		☒	☒							
2	706			5	☒ 5		☒	☒	☒	☒							
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): H.T.

Bottom Depth: 3951 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0809	0109
Bottom	0832	
End	0852	

Positional Information
Start Lat: 49 ° 59.86 N
Lon: 147 ° 39.85 W

Bottom Lat: 49 ° 59.99 N
Lon: 147 ° 39.98 W

End Lat: 49 ° 59.99 N
Lon: 147 ° 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: 2011-26 Station: TRAPS-R Event #: 101 Ship: TULLY UTC Date (dd|mmm|yyyy): 15 | 6 | 11

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	707			100	✓ 100											
2	708			100	✓											
3	709			100	✓											
4	710			100	✓											
5	711			100	✓											
6	712			100	✓											
7	713			100	✓											
8	714			100	✓											
9	715			100	✓											
10	716			MAX	✓ 50											
11	717			MAX	✓											
12	718			MAX	✓											
13	719			MAX	✓											
14	720			MAX	✓											
15	721			MAX	✓											
16	722			MAX	✓											
17	723			MAX	✓											
18	724			MAX	✓											
19																
20																
21																
22																
23																
24																

Watchkeeper(s):

Bottom Depth: 4171 m
Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0417	1817
Bottom	0119	1817
End	0123	1823

Positional Information
Start
Lat: 50 ° 3.91 N
Lon: 144 ° 36.56 W

Bottom
Lat: 50 ° 3.88 N
Lon: 144 ° 36.58 W

End
Lat: 50 ° 3.87 N
Lon: 144 ° 36.59 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: 2011-26 Station: TRAP-R Event #: 102 Ship: TULLY UTC Date (dd mmm/yyyy): 15 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken							Oxygen Titrations		Comments			
			Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Th	CHL	HPCL	MP	FCM	Flask Serial #		Value mL · L ⁻¹		
1	1	725	500	✓					✓								
2	2	726	300	✓					✓								
3	3	727	200	✓					✓								
4	4	728	150	✓					✓								
5	5	729	100	✓					✓								
6	7	730	75	✓					✓								
7	8	731	50	✓					✓								
8	11	732	30	✓					✓								
9	13	733	20	✓					✓								
10	15	734	10	✓					✓								
11	18	735	0	✓					✓								
12	9	736	MAX	✓	48				✓								
13	6	737	1%	✓	85					4	4	1	3				
14	10	738	5%	✓	48					2	2		3				
15	12	739	9%	✓	24					4	4	1	3				
16	14	740	17%	✓	14					2	2		3				
17	16	741	30%	✓	10					4	4	1	3				
18	17	742	55%	✓	5					2	2		3				
19	19	743	100%	✓	0					4	4	1	3				
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): H.M.

Bottom Depth: 4129 m

Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		<u>1431</u>	<u>0731</u>
Bottom		<u>1437</u>	
End		<u>1500</u>	

Positional Information

Start Lat: 50 ° 04.02 N

Lon: 144 ° 36.38 W

Bottom Lat: 50 ° 03.96 N

Lon: 144 ° 36.34 W

End Lat: 50 ° 03.81 N

Lon: 144 ° 36.47 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: 2011-26 Station: UW floatEvent #: 103Ship: TullyUTC Date (dd mmm/yyyy): 15 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	t°C							Flask Serial #	Value mL · L ⁻¹	
1		744	1000	☒ 500	☒			4.2							2068	0.974	stopped @ 500 m
2		745	500	☒ 500	☒			4.1							1144	0.936	
3		746	300	☒ 300	☒			4.5							631	2.044	
4		747	200	☒ 120	☒			5.9							468	4.535	? no fire ?
5		748	120	☒ 120	☒			5.8							1475/1248	4.544	4.541
6		749	75	☒ 75	☒			5.9							3028	7.032	
7		750	40	☒ 40	☒			7.7							1397/1373	6.996	6.989
8		751	10	☒ 10	☒			7.9							3151/1318	6.957	6.953
9		752	5	☒ 5	☒	W/O ₂		7.9							745	6.955	
10		753	0			W/O ₂		7.9							2020	6.964	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): py

Bottom Depth: _____ m

Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	0553	2253
Bottom	0605	2305
End	0626	2326

Positional Information

Lat:	50 ° 28.33	N
Lon:	142 ° 7.41	W

Lat:	50 ° 28.23	N
Lon:	142 ° 7.20	W

Lat:	50 ° 28.13	N
Lon:	142 ° 7.01	W

Oxygen Info For This Cast

Blank Value:	0.0023	mL · L ⁻¹
Std Value:	0.7157	mL · L ⁻¹
*Date Run:	16 6 11	
Analyst:	H.M.	

* 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: 2011-26 Station: EDDY Event #: 104 Ship: TULLY UTC Date (dd mmm yyyy): 16 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments			
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	NUT	CHL	HPLC	DIL	pH	T°	Flask Serial #		Value mL · L ⁻¹		
1		754	2000	✓		✓	✓	✓	✓			✓	✓		2.6	569	1.363	
2		755	1500	✓		✓	✓		✓			✓	✓		2.7	3182	0.527	(0.397?)
3		756	1000	✓		✓	✓	✓	✓			✓	✓		3.3	1374	T ID	0.329
4		757	800	✓		✓	✓		✓			✓	✓		3.9	1402	4.0/3196	0.897/0.389
5		758	600	✓		✓	✓		✓			✓	✓		4.5	1398	0.639	0.639
6		759	400	✓		✓	✓		✓			✓	✓		5.7	1621	1.130	
7		760	300	✓		✓	✓					✓	✓		6.7	10241	1.389	
8		761	250	✓		✓	✓					✓	✓		6.2	1146	1.507	
9		762	200	✓		✓	✓					✓	✓		6.4	528	1.649	
10		763	175	✓		✓	✓					✓	✓		6.5	371	1.894	
11		764	150	✓		✓	✓					✓	✓		6.5	196	1.878	
12		765	125	✓		✓	✓					✓	✓		6.6	3090	6.6/1404	2.367/2.371
13		766	100	✓		✓	✓			✓		✓	✓		6.5	3126	4.968	
14		767	75	✓		✓	✓			✓		✓	✓		6.3	1378	6.837	
15		768	50	✓		✓	✓			✓		✓	✓		6.9	647	7.094	
16		769	25	✓		✓	✓			✓		✓	✓		8.3	3457	6.825	
17		770	10	✓		✓	✓			✓		✓	✓		8.4	1298	6.763	
18		771	5	✓		✓	✓	✓		✓		✓	✓		8.4	2014	6.815	
19		772	MAX	✓	40						✓							
20		773	MAX	✓	50						✓							
21		774	5	✓							✓							
22																		
23																		
24																		

Watchkeeper(s): H.M.

Bottom Depth: 4129 m
Transmisso Cleaned: (Y) / N

	Time	UTC	Local
Start		1054	0354
Bottom		1116	
End		1157	

Positional Information
Start
Lat: 50 ° 24.50 N
Lon: 141 ° 00.00 W

Bottom
Lat: 50 ° 24.57 N
Lon: 141 ° 00.00 W

End
Lat: 50 ° 24.65 N
Lon: 141 ° 00.01 W

Oxygen Info For This Cast
Blank Value: 0.0023 mL · L⁻¹
Std Value: 0.7157 mL · L⁻¹
*Date Run: 16 6 11
Analyst: H.M.

* 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: 2011-26 Station: 2308 Event #: 109 Ship: TULLY UTC Date (dd mmm yyyy): 19 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal							T	Flask Serial #	Value mL · L ⁻¹	
1		775	Bot 10	✓ 129	✓	✓								6.9	1298	1.252	retaken in same bottle / 7.1
2		776	125	✓	✓	✓✓	✓							6.9	2014	1.338	
3		777	100	✓	✓	✓								7.0	1408	1.457	
4		778	75	✓	✓✓	✓								7.3/7.3	1307	2.210	3206 / 7.3 = 2.197
5		779	50	✓	✓	✓								7.6	1392	2.782	
6		780	30	✓	✓	✓								9.0	3090	4.987	BUBBLE in Lens
7		781	20	✓	✓	✓								9.6	1404	5.695	
8		782	10	✓	✓	✓								10.8	3126	8.475	
9		783	5	✓	✓	✓	✓							10.9	1378	8.974	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s):

Bottom Depth: 458 145 m

Transmisso Cleaned: Y / N

	Time	UTC	Local
Start		0218	1918
Bottom		0221	1921
End		0231	1931

Positional Information

Start Lat: 48 ° 25.32 N
Lon: 125 ° 28.62 W

Bottom Lat: 48 ° 25.31 N
Lon: 125 ° 28.57 W

End Lat: 48 ° 25.32 N
Lon: 125 ° 28.50 W

Oxygen Info For This Cast

Blank Value: 0.0023 mL · L⁻¹
Std Value: 0.7157 mL · L⁻¹
*Date Run: 16 6 11
Analyst: H. A.

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