

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

	UTC	Local
Time 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

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 d	Nut	Sal	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): DYBottom Depth: 117 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2035	1335
Bottom	2037	1337
End	2056	1356

Positional Information

Start
Lat: 48° 35.87 N
Lon: 125° 59.76 WBottom
Lat: 48° 35.86 N
Lon: 125° WEnd
Lat: 48° 35.88 N
Lon: 125° 59.73 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: 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	ML/KS	PH/KS	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 / MK

Bottom Depth: 107 m
Transmisso 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 W

Bottom
Lat: 48 ° 35.94 N
Lon: 125 ° 59.77 W

End
Lat: 48 ° 36.01 N
Lon: 125 ° 59.85 W

Oxygen Info For This Cast
Blank Value: 0.0037 mL · L⁻¹
Std Value: 0.7267 mL · L⁻¹
*Date Run: 5.5.11
Analyst: HM.

*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: TULLEY 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	HPLC			
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	2221	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

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 ^{MR} _{froz}	Sal ^{MR} _{SM}	MR _{NOT COOL}	DIC _{KS}	pH _{Kd}	DO ₂	TEMP	Flask Serial #	Value mL · L ⁻¹			
1	1	27	Bot-10	✓	1320	✓	✓	✓	✓	✓	✓	✓		3.9	1298	0.503	
2	2	28	1250	✓		✓	✓	✓✓	✓	✓✓	✓	✓		4.0	204	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 b
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

Lat:	48 ° 38.98	N
Lon:	126 ° 39.88	W

Start

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⁻¹Std Value: _____ mL · L⁻¹

*Date Run: _____

Analyst: _____

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

OXY = WHITE BOX

② Cs #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): DY JS

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

Time	UTC	Local
Start	0400	2100
Bottom	0419	2119
End	0443	2143

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 ° 39.02 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 ☒ F102	Sal	NUT ☒ coul	UBC				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):
DY 1Bottom Depth: 1326 mTransmisso 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 WBottom
Lat: 48 ° 38.93 N
Lon: 126 ° 41.13 WEnd
Lat: 48 ° 38.99 N
Lon: 126 ° 41.15 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

④ Th + Po Cast
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	✓	39				✓							
24	24	117	MAX	✓	39				✓							

Watchkeeper(s): A.M.Bottom Depth: 1332 mTransmisso Cleaned: Y I 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.A.

Bottom Depth: 1320 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1210	0510
Bottom	1214	
End	1224	

Positional Information

Lat:	48 ° 38.93	N
Lon:	126 ° 40.02	W

Start

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%	☒ 12													
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): A.M.

Bottom Depth: 1325 m

Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	1314	
Bottom	1317	
End		

Positional Information

Lat:	48° 39.11	N
Lon:	126° 40.47	W

Start

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: P4Event #: 16Ship: TULLYUTC 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 P E-d	CHL	HPCL	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):

H.M.

Bottom Depth: 1300 mTransmisso Cleaned: (Y) N

Time	UTC	Local
Start	1505	0805
Bottom	1510	
End	1528	

Positional Information

Start	Lat: <u>48°</u> ° <u>39.17</u> N
	Lon: <u>126°</u> ° <u>40.00</u> W

Bottom	Lat: <u>48°</u> ° <u>39.18</u> N
	Lon: <u>126°</u> ° <u>40.01</u> W

End	Lat: <u>48°</u> ° <u>39.19</u> N
	Lon: <u>126°</u> ° <u>40.30</u> 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: 2011-16

Station: P5

Event #: 17

Ship: TULCH

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	HAc			
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: Tolly 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	NH₄ HPLC						
1	167			MAX	✓	45	✓		✓	✓						
2	168			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: 2545 m

Transmissio Cleaned: (Y) / N

	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																
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13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

↳ nutrients kept in cold room ~ 12 hours before being frozen

Watchkeeper(s): DY

Bottom Depth: 2503 m

Transmisso Cleaned: Y / 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	HPLC	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	6.591	
20	17	190	MAX 10	✓	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

Start
Lat: 48° 49.16 N
Lon: 128° 40.12 WBottom
Lat: 48° 49.03 N
Lon: 128° 40.26 WEnd
Lat: 48° 48.97 N
Lon: 128° 40.28 W

Oxygen Info For This Cast

Blank Value: 0.0023 mL · L⁻¹Std Value: 0.7160 mL · L⁻¹*Date Run: 7 | 6 | 11Analyst: 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	HPLC			
1	193			MAY	60		✓		✓		✓✓			
2	194			5	5		✓	✓	✓		✓✓			
3														
4														
5														
6														
7														
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21														
22														
23														
24														

Watchkeeper(s): N M

Bottom Depth: 2338 m

Transmissio Cleaned: ☒ Y / ☐ N

	Time	UTC	Local
Start		1108	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 ° 10.05 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	NPLO						
1	195			max	✓ 39		✓		✓	✓						
2	196			5	✓ 5		✓	✓	✓	✓						
3																
4																
5																
6																
7																
8																
9																
10																
11																
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14																
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18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H.N.

Bottom Depth: 2641 m

Transmisso Cleaned: Y / N

	UTC	Local
Time		
Start	1500	0800
Bottom	1520	
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	HDL						
1	197			Max	☒	55	☒		☒		☒	☒					
2	198			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: 2750 m
Transmisso Cleaned: Y / N

	UTC	Local
Time		
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 DMS	Nut	Star	DMS t-d	IOB CMC	HPLC	DB CMC	DB HPLC	MPH	FLM	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 ✓	✓	40	✓	✓			✓							
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): 104Bottom Depth: 32 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	2301	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	Sal	WWT Cool	DIC K5	PH K5	URE	K102		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	✓		✓				✓				7.1/7.2	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

Lat:	48 ° 58.63	N
Lon:	130 ° 40.69	W

Lat:	48 ° 59.00	N
Lon:	130 ° 41.46	W

Lat:	48 ° 59.16	N
Lon:	130 ° 42.58	W

Oxygen Info For This Cast

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

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

③ 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	Qo						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	✓	45				✓								
24	17	268	MAX	✓	45			✓									

Watchkeeper(s):
DY

Bottom Depth: 2994 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0500	2200
Bottom	0510	2210
End	0532	2232

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

④ ⑤ 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 froz	Sal	Nut cool	UBC				Flask Serial #	Value $\text{mL} \cdot \text{L}^{-1}$	
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: <u>48</u> ° <u>58.32</u> N
	Lon: <u>130</u> ° <u>43.56</u> W

Bottom

Lat: ° N
Lon: ° W

End

Lat: <u>48</u> ° <u>58.30</u> N
Lon: <u>130</u> ° <u>43.60</u> W

Oxygen Info For This Cast

Blank Value: _____ $\text{mL} \cdot \text{L}^{-1}$
Std Value: _____ $\text{mL} \cdot \text{L}^{-1}$
*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	NH ₄ HPLC						
1	293			MAX	☒	43		☒		☒	☒						
2	294			5	☒	5		☒	☒	☒	☒						
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
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21																	
22																	
23																	
24																	

Watchkeeper(s): H.N.

Bottom Depth: 2991 m

Transmisso Cleaned: ☒ Y / ☐ 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): dy

Bottom Depth: 3410 m

Transmisso Cleaned: Y / N

	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 cast

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

Start
Lat: 49 ° 17.00 N
Lon: 134 ° 40.15 W

Bottom
Lat: 49 ° 17.02 N
Lon: 134 ° 40.34 W

End
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

② Th + Po cast

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

③ Deep cast

0.0101334
1000+P

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/mm/yyyy): 0 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken										Oxygen Titrations		Comments	
			Target Pressure	Confirmed Pressure	Oxy MR	Nut Prox	Sal KR	MR DUT COOL	MS DIC	PH KS	UBC	KIEL	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		2.1 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	Valve 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

Start

Bottom

Lat:	49 ° 16.06	N
Lon:	134 ° 40.99	W

End

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 CWT	DB HPC	YP	FLM		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): J.M.

Bottom Depth: 3636 m

Transmisso Cleaned: (Y) I N

Time	UTC	Local
Start	1725	1023
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/mm/yyyy): 8 6 11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed ✓ Pressure	Oxy DMS	Nut Froz	Sal	CNC	HPLC	DHSP d.t			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.M.

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: Tully

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): 24

Bottom Depth: 3630 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
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: 201126

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	PO ₄					
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.N.

Bottom Depth: 3930 m

Transmissio Cleaned: Y / N

	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

① Th + Po Cast

Water Properties Group

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	TM	PO							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	✓	55				✓									
24		423	MAX	✓	55			✓										

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	DB C4C	DB 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								Temp	Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Nut	DOC	PH	UCL	K102		Flask Serial #	Value mL · L ⁻¹	
1	1	431	Bot-10	✓ 4024							x		1.7	2056	3.031	BOTTLES NOT WATERED
2	2	432	3500	✓			x		x				1.7	1386	2.880	SHAKEN x 2?
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		5.9/6.0	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			2027	—	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

Start
Lat: 49 ° 33.87 N
Lon: 138 ° 40.08 WBottom
Lat: 49 ° 34.05 N
Lon: 138 ° 40.18 WEnd
Lat: 49 ° 34.07 N
Lon: 138 ° 40.22 W

Oxygen Info For This Cast

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

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

④ DMS cast

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	On DMS	Nut Pres	Sal	DMS End	CHL	HPCL			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	✓	xx	x		xx	xx						
10	12	464	15	✓	x	x			x						
11	13	465	10	✓	x	xx			x						
12	14	466	5	✓	x	x		x	x						
13	16	467	0	✓	x	x		x	x						
14	8	468	MAX 10	✓						xx					
15	6	469	MAX	✓						xx					
16	15	470	5	✓						xx					
17															
18															
19															
20															
21															
22															
23															
24															

Watchkeeper(s):

Bottom Depth: 3967 m

Transmisso Cleaned: 0 / 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⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

1 2 3 4 5 15 6 14 7 8 9 19 11 13 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 ☒ real	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): 29

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: P21

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	HLR			
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

	UTC	Local
Time Start	<u>0822</u>	<u>0122</u>
Bottom	<u>0856</u>	
End	<u>0919</u>	

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	NTA HPLC						
1	497			MAY	☒ 60		☒		☒	☒						
2	498			0	☒ 5		☒	☒	☒	☒						
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
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14																
15																
16																
17																
18																
19																
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22																
23																
24																

Watchkeeper(s): H.S.Bottom Depth: 3897 mTransmisso Cleaned: ☒ / N

	UTC	Local
Time		
Start	1316	0616
Bottom	1343	
End	1409	

Positional Information

Start
Lat: 49 ° 42.00 N
Lon: 140 ° 40.00 WBottom
Lat: 49 ° 42.07 N
Lon: 140 ° 39.83 WEnd
Lat: 49 ° 42.05 N
Lon: 140 ° 39.82 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: 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	chl HPLC	DIC					
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	☒											
24	522			5	☒											

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

Bottom Depth: 4053 m

Transmissio 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): dy

Bottom Depth: 3990 m

Transmissio 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	HRC					
1	526			Max	☒ 45		☒		☒		☒					
2	527			5	☒ 5		☒	☒	☒		☒					
3																
4																
5																
6																
7																
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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: 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	HPLC					
1	528			Max	✓ 44		✓		✓		✓✓					
2	529			5	✓ 5		✓	✓	✓		✓✓					
3																
4																
5																
6																
7																
8																
9																
10																
11																
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13																
14																
15																
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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

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

Positional Information

Start Lat: 50 ° 00.03 N
Lon: 144 ° 50.15 W

Start

Bottom Lat: 50 ° 00.02 N
Lon: 144 ° 50.10 W

Bottom

End Lat: 50 ° 00.01 N
Lon: 144 ° 50.06 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

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	CHK	HPLC	PH	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																
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17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H.M.

Bottom Depth: 4231 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1452	0752
Bottom	1455	
End	1504	

Positional Information

Start Lat: 50 ° 00.59 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	ONAR	DIC	UW DOC	UW SAL		Flask Serial #	Value mL · L ⁻¹	
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):

Bottom Depth: 4220 m
Transmisso Cleaned: (Y) / N

Time	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

Water Properties Group

Cs cast 2
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): dy

Bottom Depth: 4258 m
Transmisso Cleaned: Y / N

	Time	UTC	Local
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

ONAP 2

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26 Station: P26 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 UW	Nut	Sal UW	UW OND					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

Time	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

ONAr 3
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 UW	Nut	Sal UW		UW ONAr	UW DIC					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	W
▼		
Bottom	Lat: 50 ° 02.66	N
	Lon: 144 ° 52.71	W
▼		
End	Lat: 50 ° 02.66	N
	Lon: 144 ° 52.71	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

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 CO2	Sal H.M	P.Y. Nut Cool	M.R. DIC	M.R. Aik	C.M. UBC	C.C. KIEL	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		x	1.4	2056	3.240	
2	2	632	4000	✓	x	xx	xx	5	xx	x	x		x	1.4	1386	3.208	
3	3	633	3500	✓	x	xx	x	x	x	x		x	xx	1.4	3061	2.938	
4	4	634	3000	✓	xx	xx	x	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		x	2.0	1327	1.321	
7	7	637	1500	✓	x	xx	x	x	x	x	x		x	2.4	3107	0.605	
8	8	638	1250	✓	x	xx	x	x	x	x	x		x	2.7	1335	0.410	
9	9	639	1000	✓	x	xx	x	5	x	x	x	x	x	3.1	1134	0.398	
10	10	640	800	✓	x	xxx	x	xx	x	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	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 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1521	
Bottom	1615	
End	1732	

Positional Information

Lat: 49 ° 59.92 N

Lon: 145 ° 00.00 W

Start

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⁻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

DMS cast

Water Properties Group

Rosette Log

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

Cruise ID: 2-011-26 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 Roz	Sal	DMS to	CHL	HPLC	ph-to		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	✓	45						xx				
15	8	669	MAX	✓	35						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

Time	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: P26 Event #: 85 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 IOS		UW ONAR	Flask Serial #	Value mL • L ⁻¹	
1		671	30	✓	xx		x		xx			
2		672	20	✓	xx		✓		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): 89

Bottom Depth: 4257 m
Transmisso Cleaned: Y / N

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

Positional Information		
Start	Lat: <u>50</u> ° <u>0.13</u>	N
	Lon: <u>144</u> ° <u>59.96</u>	W
▼		
Bottom	Lat: <u>50</u> ° <u>0.12</u>	N
	Lon: <u>144</u> ° <u>59.98</u>	W
▼		
End	Lat: <u>50</u> ° <u>0.09</u>	N
	Lon: <u>145</u> ° <u>0.01</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

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

Cruise ID: 2011-26 Station: P26 Event #: 8f Ship: TULLY UTC Date (dd|mmm|yyyy): 13|6|11

[illegible]

Watchkeeper(s): M

Bottom Depth: 4257 m

Transmisso Cleaned: Y / N

<i>Time</i>	<i>UTC</i>	<i>Local</i>
Start	0451	2157
Bottom	19528	2228
End	0607	2307

Positional Information			
Lat:	50	° 0.03	N
Lon:	144	° 59.79	W

Start

Bottom	Lat: 50 ° 0.10 N
	Lon: 144 ° 59.80 W

Bottom

End	Lat: 50 ° 0.11 N
	Lon: 144 ° 59.80 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

ONAR 5

Water Properties Group

Rosette Log

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

Cruise ID: 2011-26Station: P26Event #: 93Ship: TULLYUTC Date (dd/mm/yyyy): 13/6/11

Firing #	Niskin #	Sample #	Rosette Operation		Samples Taken								Oxygen Titrations		Comments
			Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	170					Flask Serial #	Value mL · L ⁻¹	
1		700	200	✓	2	✓	2	170							
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 mTransmisso Cleaned: (Y) / N

Time	UTC	Local
Start	1943	1243
Bottom	1946	1246
End	1955	

Positional Information

Start	Lat: <u>50</u> ° <u>0.03</u> N
	Lon: <u>144</u> ° <u>59.89</u> W

Bottom	Lat: <u>50</u> ° <u>0.03</u> N
	Lon: <u>144</u> ° <u>59.89</u> W

End	Lat: <u>50</u> ° <u>0.10</u> N
	Lon: <u>144</u> ° <u>59.92</u> 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: ARGOS Event #: 97 Ship: TULLY 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. G.

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): MY

Bottom Depth: 4171 m

Transmisso Cleaned: (Y) / N

Time	UTC	Local
Start	0117	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 mTransmisso 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 WBottom
Lat: 50 ° 03.96 N
Lon: 144 ° 36.34 WEnd
Lat: 50 ° 03.81 N
Lon: 144 ° 36.47 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: UW float Event #: 103 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	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				7.9							745	6.955	
10		753	0					7.9							2020	6.964	
11																	
12																	
13																	
14																	
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17																	
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19																	
20																	
21																	
22																	
23																	
24																	

Watchkeeper(s): dy

Bottom Depth: _____ m

Transmisso Cleaned: Y / N

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

Positional Information
Start
Lat: 50 ° 28.33 N
Lon: 142 ° 7.41 W

Bottom
Lat: 50 ° 28.23 N
Lon: 142 ° 7.20 W

End
Lat: 50 ° 28.13 N
Lon: 142 ° 7.01 W

Oxygen Info For This Cast
Blank Value: 0.00 23 mL · L⁻¹
Std Value: 0.7157 mL · L⁻¹
*Date Run: 16 6 11
Analyst: 14.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	HPCL	DIL	PH	Flask Serial #	Value mL · L ⁻¹				
1		754	2000	✓		✓	✓	✓	✓			✓	✓		2.6	569	1.363	
2		755	1500	✓		✓	✓		✓			✓	✓		2.7	3182	0.527	(0.387?)
3		756	1000	✓		✓	✓	✓	✓			✓	✓		3.3	1374	7.10	0.329
4		757	800	✓		✓	✓		✓			✓	✓		3.9	1402	4.013196	0.897 / 0.389
5		758	600	✓		✓	✓		✓			✓	✓		4.5	1392	0.639	0.639
6		759	400	✓		✓	✓		✓			✓	✓		5.7	1121	1.130	
7		760	300	✓		✓	✓					✓	✓		6.7	1021	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=10	✓	40		✓				✓							
20		773	MAX	✓	50						✓							
21		774	5	✓							✓							
22																		
23																		
24																		

Watchkeeper(s): H.M.

Bottom Depth: 429 m
Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	1054	0354
Bottom	1116	
End	1157	

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

Lat: 50 ° 24.57 N
Lon: 141 ° 00.00 W

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: ZB08 Event #: 109 Ship: TULCY 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	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										
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22										
23										
24										

Watchkeeper(s): RT

Bottom Depth: 458.145 m

Transmisso Cleaned: Y / N

	UTC	Local
Time		
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.M.

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