

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03

Station: SI03

Event #: 1/2

Ship: Tully

UTC Date (dd|mmm|yyyy): 28 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	1	1298	0.0201↓	200	✓	215										titration aborted
2	2	1316	0.019	200	✓	199										
3	3	1393	0.018	175	✓	175										
4	4	1402	0.049	150	✓											
5	5	2019	0.374	125	✓		✓									O ₂ stopper loose - MQ mixed w/ sample
6	6	1401	1.975	100	✓											stopper loose - MQ mixed w/ sample
7	7	1392	3.256	75	✓											
8	8	1377	3.934	50	✓											
9	9	1313	4.746	25	✓											
10	10	1300	5.052	10	✓											
11	11	1314	5.271	5	✓											
12																
13																
14	5	1248	0.190	125												
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): EVERYONE

Bottom Depth: 226 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2312	1512
Bottom	2317	1517
End	2336	1536

Positional Information

Start

Lat: 48° 35.48 N

Lon: 123° 30.02 W

Bottom

Lat: 48° 35.47 N

Lon: 123° 30.02 W

End

Lat: 48° 35.46 N

Lon: 123° 30.05 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: Tris

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

OXY - ORANGE BOX
NUTS - BROWN

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P2 Event #: 004 Ship: TULCY UTC Date (dd|mmm|yyyy): 29 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DMS	HALC				
1	13	1453	2.811	Bot-10	☒	107	✓	✓								
2	14	1454	2.839	100	☒		✓	✓	✓							
3	15	1451	4.429	75	☒		✓	✓	✓							
4	16	1447	4.462	75	☒			✓	✓							
5	17	1341	5.425	50	☒	✓	✓	✓	✓							
6	18	1443	5.584	30	☒											OSU
7	19	1340	5.777	25	☒	✓✓	✓	✓	✓✓							
8	20	1446	6.331	10	☒	✓	✓	✓	✓			✓				
9	21	—	—	10	☒						✓	✓				}
10	22	—	—	10	☒											
11	23	—	—	10	☒											
12	24	—	—	10	☒											
13	25	1433	6.789	5	☒	✓	✓	✓	✓			✓				
14	26	1347	6.765	5	☒											OSU
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): Wm/K.S./M.S.

Bottom Depth: 117 m

Transmisso Cleaned: ☒ Y ☐ N

Time	UTC	Local
Start	<u>1355</u>	<u>0749</u>
Bottom	<u>1555</u>	<u>0755</u>
End	<u>1602</u>	<u>0802</u>

Positional Information

Start Lat: 48 ° 36.03 N

Lon: 126 ° 00 04 W

Bottom Lat: 48 ° 36 03 N

Lon: 126 ° 00 04 W

End Lat: 48 ° 36 02 N

Lon: 126 ° 00 08 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

OXY - BLUE BOX
NUTS - GREEN RACK

OXY DUPLICATE
#19 BOT 7

FLASH-1375
E.P. = 5.791

Water Properties Group

Rosette Log

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

① DMS CAST / UVIC

Cruise ID: 2009-03 Station: PA Event #: 007 Ship: TULLY UTC Date (dd|mmm|yyyy): 29 | Jan | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	HPLC	Phyto	DMS	DMS		
1	28			600	✓											D
2	29			300	✓											D
3	30			200	✓	✓	✓						✓	✓		
4	31			175	✓	✓	✓						✓	✓		
5	32			150	✓											D
6	33			100	✓											D
7	34			100	✓	✓	✓		✓				✓	✓		
8	35			75	✓	✓	✓		✓							
9	36			75	✓											D
10	37			50	✓	✓	✓		✓							
11	38			40	✓	✓	✓		✓							
12	39			40	✓											D
13	40			30	✓											D
14	41			30	✓	✓	✓		✓							
15	42			25	✓	✓	✓		✓		✓					
16	43			20	✓											D
17	44			20	✓	✓	✓		✓				✓	✓		
18	45			15	✓	✓	✓		✓							
19	46			10	✓											D
20	47			10	✓	✓	✓		✓		✓					
21	48			5	✓	✓	✓		✓		✓	✓	✓	✓		
22	49			0	✓	✓	✓		✓				✓	✓		
23	50			0	✓											D
24																

Watchkeeper(s): Tara, Doug, Bart

Bottom Depth: 1322 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	<u>2015</u>	<u>1215</u>
Bottom	<u>2027</u>	<u>1227</u>
End	<u>2059</u>	<u>1259</u>

Positional Information

Start Lat: 48 ° 39.04 N
Lon: 126 ° 40.01 W

Start

Bottom

Lat: 48 ° 39.05 N
Lon: 126 ° 40.03 W

End

Lat: 48 ° 39.04 N
Lon: 126 ° 40.08 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

RED RACK

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P4 Event #: 008 Ship: Tully UTC Date (dd|mmm|yyyy): 29 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH₄ PLC						
1	51		40m	1%	☒ 47		☒		☒	☒						
2	52			30	☒ 30											osu
3	53		12m	10%	☒ 15		☒		☒	☒						
4	54		5m	30%	☒ 7		☒		☒	☒						
5	55			5	☒											osu
6	56		3m	55%	☒		☒		☒	☒						
7	57		surface	100%			☒		☒	☒						
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): _____

Bottom Depth: 1323 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	<u>2159</u>	<u>1359</u>
Bottom	<u>2201</u>	<u>1401</u>
End	<u>2217</u>	<u>1417</u>

Positional Information

Start
 Lat: 48 ° 39 03 N
 Lon: 126 ° 40 01 W

Bottom
 Lat: 48 ° 39.02 N
 Lon: 126 ° 40.01 W

End
 Lat: 48 ° 39.00 N
 Lon: 126 ° 40.03 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P4 Event #: 009 Ship: Tully UTC Date (dd|mmm|yyyy): 29 | Jan | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄ DIC	PH	FCM	GAS	HR		
1	58	1298	0.521	Bot-10	✓	1323	✓	✓	✓	✓	✓					
2	59	1316	0.438	1250	✓		✓	✓	✓	✓	✓					
3	60	1393	0.429	1250	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	61	1402	0.278	1000	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	62	2019	0.192	800	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6	63	1401	0.349	600	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
7	64	1392	0.986	400	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
8	65	1377	1.339	300	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
9	66	1313	2.107	250	✓		✓	✓	✓	✓	✓					
10	67	—	—	250	✓											ONAR
11	68	1314	2.104	200	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
12	69	1315	2.381	175	✓		✓	✓	✓	✓	✓					
13	70	1176	2.163	150	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
14	71	1395	3.602	125	✓		✓	✓	✓	✓	✓					
15	72	690	3.727	100	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
16	73	1317	4.915	75	✓		✓	✓	✓	✓	✓					
17	74	—	—	75	✓											ONAR
18	75	—	—	50	✓											ONAR
19	76	1213	6.720	50	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
20	77	—	—	30	✓											ONAR
21	78	1389	6.437	25	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
22	79	1307	6.608	10	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
23	80	1399	6.658	5	✓		✓	✓	✓	✓	✓					
24	81	—	—	5	✓											ONAR

Watchkeeper(s): Tal, Doug, Rob, Damien

Bottom Depth: 1324 m

Transmisso Cleaned: Y / N

	Time	UTC	Local
Start		2248	1448
Bottom		2311	1511
End		2354	1554

Positional Information

Start Lat: 48° 39.00 N

Lon: 126° 40.03 W

Start

Bottom

Lat: 48° 39.01 N

Lon: 126° 40.02 W

End

Lat: 48° 39.02 N

Lon: 126° 40.02 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

OXY - ORANGE BOX
NUTS - BLUE

OXY DUPLICATE
FLASK 1248 — 0.206-1/2
62 BOT 5

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03Station: P4Event #: 0013Ship: TullyUTC Date (dd|mmm|yyyy): 30 | Jan | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	82			1300	☒											
2	83			1300	☒											
3	84				☒											
4	85				☒											
5	86				☒											
6	87				☒											
7	88				☒											
8	89				☒											
9	90				☒											Niskin didn't fire - trigger jammed
10	91				☒											
11	92			1300	☒											
12	93			1300	☒											
13	94			500	☒											
14	95			500	☒											
15	96				☒											
16	97				☒											
17	98				☒											
18	99				☒											
19	100				☒											
20	101				☒											
21	102				☒											
22	103				☒											
23	104			500	☒											
24	105			500	☒											

Watchkeeper(s):
Tera, Bart, DamienBottom Depth: 1317 mTransmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0149	1749
Bottom	0212	1815
End	0240	1840

Positional Information

Start
Lat: 48 ° 39.06 N
Lon: 126 ° 40.00 WBottom
Lat: 48 ° 39.05 N
Lon: 126 ° 40.09 WEnd
Lat: 48 ° 39.00 N
Lon: 126 ° 40.07 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 UBC SHALLOW CAST

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03

Station: P4

Event #: 014

Ship: Tully

UTC Date (dd|mmm|yyyy): 30 | Jan | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	106			1000	☒											
2	107			1000	☒											
3	108				☒											
4	109				☒											
5	110				☒											
6	111				☒											
7	112				☒											
8	113				☒											
9	114				☒											
10	115				☒											
11	116			1000	☒											
12	117			1000	☒											
13	118			10	☒											
14	119			10	☒											
15	120			10	☒											
16	121			10	☒											
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s):
Tara, Doug, Marnie, Kendra

Bottom Depth: 1312 m

Transmisso Cleaned: ☒ / ☐ N

Time	UTC	Local
Start	<u>03:53</u>	<u>19:53</u>
Bottom	<u>04:11</u>	<u>20:11</u>
End	<u>04:31</u>	<u>20:31</u>

Positional Information

Lat:	<u>48° 39.08</u>	<u>N</u>
Lon:	<u>126° 40.11</u>	<u>W</u>

Start

Bottom

End

Lat:	<u>48° 39.05</u>	<u>N</u>
Lon:	<u>126° 40.13</u>	<u>W</u>

Lat:	<u>48° 39.04</u>	<u>N</u>
Lon:	<u>126° 39.96</u>	<u>W</u>

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P8 Event #: 18 Ship: TULLY UTC Date (dd/mmm/yyyy): 30 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	NO ₃	NO ₂	PO ₄	
1	125	1453	1.440	2000	☒	2000	✓	✓	✓					
2	126	1454	0.607	1500	☒		✓	✓						
3	127	1451	—	1250	☒									MISFIRE
4	128	1447	0.222	1000	☒		✓							
5	129	1341	0.229	800	☒									
6	130	1443	0.499	600	☒									
7	131	1340	1.393	400	☒									
8	132	1446	2.300	300	☒									
9	133	1212	3.013	250	☒									
10	134	1424	3.755	200	☒									
11	135	1361	3.780	175	☒									
12	136	1351	4.151	150	☒									
13	137	1433	5.049	125	☒									
14	138	1347	6.210	100	☒	✓			✓					
15	139	1354	6.707	75	☒				✓					
16	140	1366	6.723	50	☒	✓	✓	✓	✓					
17	141	—	—	30	☒									OSU
18	142	1364	6.740	25	☒	✓	✓	✓	✓	✓				
19	143	1204	6.585	10	☒	✓	✓	✓	✓	✓				
20	144	—	—	10	☒			✓			✓			
21	145	—	—	10	☒			✓						
22	146	—	—	10	☒			✓						
23	147	—	—	10	☒			✓						
24	148	1356	6.750	5		✓	✓	✓	✓	✓				

Watchkeeper(s): HM + K.J. / K.M. / K.G.

Bottom Depth: 2520 m

Transmisso Cleaned: ☒ Y / N

Time	UTC	Local
Start	1815	1015
Bottom	1847	1047
End	1934	1134

Positional Information

Start Lat: 48 ° 48 97 N
Lon: 128 ° 39 95 W

Bottom Lat: 48 ° 48 97 N
Lon: 128 ° 39 94 W

End Lat: 48 ° 48 99 N
Lon: 128 ° 39 94 W

Oxygen Info For This Cast

Blank Value: _____ mL • L⁻¹

Std Value: _____ mL • L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

Version: 28 Feb 2008

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

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

23
24 = OXY DUP

OXY - BLUE CASE
NUTS - YELLOW CASE

OXY DUP FLASK 1375
#138 BOT 14 E.P. - 6.221

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P12 Event #: 24 Ship: TULLY UTC Date (dd|mmm|yyyy): 31 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	152			2000	☒											
2	153			2000	☒											
3	154				☒											
4	155				☒											
5	156				☒											
6	157				☒											
7	158				☒											
8	159				☒											
9	160				☒											
10	161				☒											
11	162			2000	☒											
12	163			2000	☒											
13	164			500	☒											
14	165			500	☒											
15	166				☒											
16	167				☒											
17	168				☒											
18	169				☒											
19	170				☒											
20	171				☒											
21	172				☒											
22	173				☒											
23	174			500	☒											
24	175			500	☒											

Watchkeeper(s): A.M./K.J./M.S./K.G.

Bottom Depth: 3230 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	1422	0622
Bottom	1452	0652
End	1524	0724

Positional Information

Start Lat: 48 ° 58.15 N
Lon: 130 ° 39.95 W

Bottom Lat: 48 ° 58.20 N
Lon: 130 ° 39.97 W

End Lat: 48 ° 58.26 N
Lon: 130 ° 40.02 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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P12 Event #: 25 Ship: TULLY UTC Date (dd|mmm|yyyy): 31 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy DHS	Nut	Sal	Chl a	NH ₄						
1	176			1000	☒											
2	177			1000	☒											
3	178															
4	179															
5	180															
6	181															
7	182															
8	183															
9	184															
10	185															
11	186			1000	☒											
12	187			1000	☒											
13	188			30	☒											
14	189			10												
15	190			10												
16	191			10												
17	192			10		☒										
18	193			5												
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H/A/K/M

Bottom Depth: 3237 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	1637	0837
Bottom	1653	0853
End	1713	0913

Positional Information

Start Lat: 48 ° 58 15 N
Lon: 130 ° 40 04 W

Start

Bottom Lat: 48 ° 58 14 N
Lon: 130 ° 40 20 W

Bottom

End Lat: 48 ° 58 18 N
Lon: 130 ° 40 38 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: 2009-03 Station: P12 Event #: 27 Ship: TULLY UTC Date (dd|mmm|yyyy): 31 | 01 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	CH PH	NH ₄ DIC	FCM	GA	HR			
1	194			Bot-10	✓ 3275	✓	✓	✓	✓	✓						DID NOT FIRE
2	195	1554	2.222	3000	✓						✓	✓	✓			
3	196	1451	1.114	2500	✓					✓						
4	197	1447	1.809	2500	✓			✓								
5	198	1341	1.266	2000	✓						✓	✓	✓			
6	199	1443		1500	✓						✓	✓	✓			- didn't write down O ₂ value
7	200	1340	0.328	1250	✓						✓	✓	✓			- paused during titration said colorimeter returning invalid signal
8	201	1446	0.216	1000	✓						✓	✓	✓			
9	202	1212	0.309	800	✓						✓	✓	✓			
10	203	1429	0.532	600	✓						✓	✓	✓			
11	204	1361	1.615	400	✓						✓	✓	✓			
12	205	1351	2.727	300	✓						✓	✓	✓			
13	206	1433	3.261	250	✓					✓						
14	207	1347	3.830	200	✓						✓	✓	✓			
15	208	1354	4.193	175	✓		✓									'5.3 Tra' reading from colorimeter
16	209	1366	4.987	150	✓						✓	✓	✓			
17	210	1360	5.756	125	✓											
18	211	1364	6.110	100	✓						✓	✓	✓			
19	212	1204	6.681	75	✓		✓									
20	213	1456	6.752	50	✓						✓	✓	✓			
21	214	1358	6.728	25	✓						✓	✓	✓			
22	215	1363	6.741	10	✓						✓	✓	✓			
23	216	1356	6.744	5	✓		✓	✓	✓	✓						'5.3 Tra' reading from colorimeter
24	212	1375	6.698													

Watchkeeper(s): H/K/A/M / T/D

Bottom Depth: 3237 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1804	1004
Bottom	1852	1052
End	2005	1205

Positional Information

Start Lat: 48 ° 58.22 N
Lon: 130 ° 39.98 W

Bottom Lat: 48 ° 58.21 N
Lon: 130 ° 39.93 W

End Lat: 48 ° 58.61 N
Lon: 130 ° 39.82 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: Tara

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

OXY - BLUE BOX
NUTS - LIGHT BLUE

OXY OVP
#212 BOT 19
FLASH - 1375
EP - 6.698

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P12 Event #: 31 Ship: Tully UTC Date (dd|mmm|yyyy): 31 | Jan | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NE ₄	DMSP d	DMSP E	DAPI	FISH	N2O	
1	217			600	✓								✓✓	✓✓	✓✓	
2	218			300	✓								✓✓	✓✓	✓✓	
3	219			200	✓	✓	✓			✓	✓					
4	220			175	✓	✓	✓			✓	✓					
5	221			150	✓								✓✓	✓✓	✓✓	
6	222			100	✓								✓✓	✓✓	✓✓	
7	223			100	✓	✓	✓		✓	✓	✓					
8	224			75	✓	✓	✓		✓							
9	225			75	✓								✓✓	✓✓	✓✓	
10	226			50	✓	✓	✓		✓							
11	227			40	✓	✓	✓		✓							
12	228			40	✓								✓✓	✓✓	✓✓	
13	229			30	✓								✓✓	✓✓	✓✓	
14	230			30	✓	✓	✓		✓							
15	231			25	✓	✓	✓	✓✓	✓							
16	232			20	✓								✓✓	✓✓	✓✓	
17	233			20	✓	✓✓	✓		✓	✓✓	✓✓					
18	234			15	✓	✓	✓✓		✓							
19	235			10	✓								✓✓	✓✓	✓✓	
20	236			10	✓	✓	✓	✓✓	✓✓							
21	237			5	✓											ONAR
22	238			5	✓	✓	✓	✓✓	✓	✓	✓					
23	239			0		✓	✓		✓	✓	✓					
24	240			0									✓✓	✓✓	✓✓	

Watchkeeper(s):
Tara, Doug, Damien, Bart

Bottom Depth: 3232 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0038	1638
Bottom	0048	1648
End	0122	1722

Positional Information

Start

Lat: 48° 58.29 N

Lon: 130° 39.94 W

Bottom

Lat: 48° 58.38 N

Lon: 130° 40.03 W

End

Lat: 48° 58.55 N

Lon: 130° 40.46 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

NUTS - WHITE CASE

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P16 Event #: 33 Ship: TULLY UTC Date (dd|mmm|yyyy): 01 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy DIC	Nut	Sal	Chl a	NH ₄						
1	244			1%	✓ 80m	✓	✓		✓							
2	245			10%	✓ 37m											OSU
3	246			30m	✓ 32m	✓	✓		✓							
4	247			30%	✓ 18m	✓	✓		✓							
5	248			55%	✓ 9m											OSU
6	249			5m	✓ 5m	✓	✓		✓							
7	250			100%	✓ surf	✓	✓		✓							
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s):
Tara, Doug, Damien, Bart

Bottom Depth: 3622 m

Transmisso Cleaned: ☒ / N

	UTC	Local
Time Start	2333	1533
Bottom	2340	1540
End	2351	1551

Positional Information

Start
Lat: 49° 17.09 N
Lon: 134° 40.06 W

Start

Bottom
Lat: 49° 17.10 N
Lon: 134° 40.06 W

Bottom

End
Lat: 49° 17.07 N
Lon: 134° 40.02 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: 2009-03

Station: P16

Event #: 34

Ship: TULLY

UTC Date (dd|mmm|yyyy): 02 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl	NH ₄	DMSP	DN	DAPI	FISH	H ₂ O	
1	251			600	✓							✓	✓	✓	✓	
2	252			300	✓							✓	✓	✓	✓	
3	253			200	✓	✓	✓			✓	✓					
4	254			175	✓	✓	✓			✓	✓					
5	255			150	✓							✓	✓	✓	✓	
6	256			100	✓							✓	✓	✓	✓	
7	257			100	✓	✓	✓		✓	✓	✓					
8	258			75	✓	✓	✓		✓							
9	259			75	✓							✓	✓	✓	✓	
10	260			50	✓	52	✓	✓	✓							
11	261			40	✓	39	✓	✓	✓							
12	262			40	✓	41						✓	✓	✓	✓	
13	263			30	✓	31						✓	✓	✓	✓	
14	264			30	✓	31	✓	✓	✓							
15	265			25	✓	26	✓	✓	✓							
16	266			20	✓	21						✓	✓	✓	✓	
17	267			20	✓	21	✓	✓	✓	✓	✓					
18	268			15	✓	14	✓	✓	✓							
19	269			10	✓	9						✓	✓	✓	✓	
20	270			10	✓	9	✓	✓	✓							
21	271			5	✓	5										ONAR
22	272			5	✓	6	✓	✓	✓	✓	✓					
23	273			0	✓	2	✓	✓	✓	✓	✓					
24	274			0	✓	2						✓	✓	✓	✓	

Watchkeeper(s):
T.D.D.B

Bottom Depth: 3622 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	<u>0023</u>	<u>1623</u>
Bottom	<u>0034</u>	<u>1634</u>
End	<u>0102</u>	<u>1702</u>

Positional Information

Start

Lat: 49 ° 17.04 N

Lon: 134 ° 39.95 W

Bottom

Lat: 49 ° 17.06 N

Lon: 134 ° 39.91 W

End

Lat: 49 ° 17.06 N

Lon: 134 ° 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: 2009-03 Station: P16 Event #: 35 Ship: TULLY UTC Date (dd|mmm|yyyy): 02 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄ pH	FCM	Gases	HR			
1	275	1298	2.825	Bot-10	✓	3685	✓	✓	✓	✓	✓	✓	✓			
2	276	1316	2.679	3500	✓											
3	277	1393	2.389	3000	✓						✓	✓	✓			
4	278	1402	1.882	2500	✓											
5	279	2019	1.889	2500	✓			✓								
6	280	1401	1.243	2000	✓						✓	✓	✓			
7	281	1392	0.546	1500	✓						✓	✓	✓			
8	282	1377	0.294	1250	✓	1240					✓	✓	✓			
9	283	1313	0.244	1000	✓						✓	✓	✓			
10	284	1300	0.307	800	✓						✓	✓	✓			
11	285	1314	0.605	600	✓		✓				✓	✓	✓			
12	286	1315	1.197	400	✓						✓	✓	✓			
13	287	1176	1.973	300	✓						✓	✓	✓			
14	288	1395	2.583	250	✓											
15	289	690	3.806	200	✓						✓	✓	✓			
16	290	1317	4.363	175	✓											
17	291	1318	4.924	150	✓						✓	✓	✓			
18	292	1180	5.939	125	✓		✓									
19	293	1213	6.553	100	✓						✓	✓	✓			
20	294	1408	6.869	75	✓											
21	295	1389	6.886	50	✓						✓	✓	✓			
22	296	1307	6.900	25	✓						✓	✓	✓			
23	297	1399	6.890	10	✓						✓	✓	✓			
24	298	1248	6.877	5	✓		✓	✓	✓	✓	✓	✓	✓			

Watchkeeper(s): TOMK

Bottom Depth: 3622 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	<u>0211</u>	<u>1811</u>
Bottom	<u>0309</u>	<u>1909</u>
End	<u>0442</u>	<u>2042</u>

Positional Information

Start
Lat: 49° 17.00 N
Lon: 134° 39.32 W

Bottom
Lat: 49° 16.98 N
Lon: 134° 39.57 W

End
Lat: 49° 17.03 N
Lon: 134° 39.78 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 dup - Yellow case
NUTS = blue case
Oxy = orange case

Oxy Dup. Flask: 1409
#292 Bot 18 E.P.: 5.929

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P16 Event #: 36 Ship: Tully UTC Date (dd|mmm|yyyy): 02 | Feb | 2009

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

Watchkeeper(s): TOMK

Bottom Depth: 3624 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	<u>0556</u>	<u>2156</u>
Bottom	<u>0614</u>	<u>2214</u>
End	<u>0635</u>	<u>2235</u>

Positional Information

Start Lat: 49° 16' 81" N
Lon: 134° 39' 85" W

Start

Bottom Lat: 49° 16' 87" N
Lon: 134° 39' 99" W

Bottom

End Lat: 49° 16' 91" N
Lon: 134° 39' 83" 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: 2009-03 Station: P20 Event #: 37 Ship: TULLY UTC Date (dd|mmm|yyyy): 02 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DMSP	DN	DAPI	FISH	N20	
1	323			600	✓							✓✓	✓✓	✓✓	✓✓	
2	324			300	✓							✓✓	✓✓	✓✓	✓✓	
3	325			200	✓	✓	✓			✓	✓					
4	326			175	✓	✓	✓			✓	✓					
5	327			150	✓							✓✓	✓✓	✓✓	✓✓	
6	328			100	✓							✓✓	✓✓	✓✓	✓✓	
7	329			100	✓	✓	✓		✓	✓	✓					
8	330			75	✓	✓	✓		✓							
9	331			75	✓							✓✓	✓✓	✓✓	✓✓	
10	332			50	✓	✓	✓		✓							
11	333			40	✓	✓	✓		✓							
12	334			40	✓							✓✓	✓✓	✓✓	✓✓	
13	335			30	✓							✓✓	✓✓	✓✓	✓✓	
14	336			30	✓	✓	✓		✓							
15	337			25	✓	✓	✓	✓✓	✓							
16	338			20	✓							✓✓	✓✓	✓✓	✓✓	
17	339			20	✓	✓✓	✓		✓	✓✓	✓✓					
18	340			15	✓	✓	✓		✓							
19	341			10	✓							✓✓	✓✓	✓✓	✓✓	
20	342			10	✓	✓	✓	✓✓	✓✓							
21	343			5	✓											ONAR
22	344			5	✓	✓	✓	✓✓	✓	✓	✓					
23	345			0	✓	✓	✓		✓	✓	✓					
24	346			0	✓							✓✓	✓✓	✓✓	✓✓	

Watchkeeper(s): TDDK

Bottom Depth: 3945 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	2340	1540
Bottom	2352	1552
End	0021	1621

Positional Information

Start Lat: 49°34.07 N

Lon: 138°40.05 W

Bottom Lat: 49°34.04 N

Lon: 138°40.12 W

End Lat: 49°33.94 N

Lon: 138°40.13 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

Nuts = green rack

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03

Station: P20

Event #: 38

Ship: TULLY

UTC Date (dd|mmm|yyyy): 03 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed Pressure	Oxy	Nut	Sal	CH ₄	NH ₄	FeM	Gases	HR			
1	347	1247	3.048	2010	✓	4020	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2	348	1320	2.834	3500	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
3	349	1400	2.493	3000	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	350	1175	1.947	2500	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	351	1209	1.929	2500	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
6	352	2020	1.312	2000	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
7	353	1384	0.559	1500	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
8	354	1406	0.312	1250	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
9	355	1322	0.262	1000	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
10	356	1373	0.300	800	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
11	357	1146	0.464	600	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
12	358	1386	1.017	400	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
13	359	631	1.630	300	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
14	360	1414	2.457	250	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
15	361	1397	3.405	200	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
16	362	1106	4.198	175	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
17	363	1326	6.236	150	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
18	364	1123	6.218	125	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
19	365	1411	6.898	100	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
20	366	1380	7.041	75	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
21	367	1144	6.934	50	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
22	368	1319	6.957	25	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
23	369	1404	6.939	10	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
24	370	1409	6.930	5	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	

Watchkeeper(s): TPDB

Bottom Depth: 3946 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	0100	1700
Bottom	0206	1806
End	0341	1941

Positional Information

Start

Lat: 49° 34.03 N

Lon: 138° 40.08 W

Bottom

Lat: 49° 33.98 N

Lon: 138° 40.12 W

End

Lat: 49° 33.95 N

Lon: 138° 40.02 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

Nut = Red Case

Oxygen = Yellow Case

Oxy dup - orange case

#368 - Flask 12418

Bot 23 - 6.933

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P26 Event #: 40 Ship: TULLY UTC Date (dd|mmm|yyyy): 4 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	GHI-Dis	NH ₄ Ali	PH	ECM	6000	HR	DAWSON	
1	395	1247	3.333	Bot-10	☒	✓	✓	✓	✓	✓	✓					
2	396	1320	3.138	4000	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3	397	1400	2.885	3500	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	398	1175	2.471	3000	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	399	1209	1.917	2500	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6	400	2020	1.256	2000	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7	401	1384	0.565	1500	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
8	402	1406	0.341	1250	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9	403	1322	0.340	1000	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
10	404	1373	0.408	800	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
11	405	1146	0.483	600	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
12	406	1386	0.993	400	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
13	407	631	1.784	300	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
14	408	1414	2.609	250	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
15	409	1397	3.153	200	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
16	410	1106	3.692	175	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
17	411	1326	4.515	150	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
18	412	1123	5.932	125	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
19	413	1411	6.840	100	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
20	414	1380	6.964	75	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
21	415	1144	6.934	50	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
22	416	1319	6.556	25	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
23	417	1404	6.966	10	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
24	418	1409	6.978	5	☒	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Watchkeeper(s): W/K/M/K

Bottom Depth: 4220 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1713	0913
Bottom	1816	1016
End	1938	1138

Positional Information

Start Lat: 49 ° 59.99 N
Lon: 144 ° 59.92 W

Start

Bottom Lat: 49 ° 59.95 N
Lon: 145 ° 00.07 W

Bottom

End Lat: 49 ° 59.73 N
Lon: 145 ° 00.49 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

Nuts - brown rack

OXY - YELLOW CASE

OXY DUP ORANGE CASE

OXY DUP
412
BOT 18

FLASH: 1248
S.A: 5.934

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03

Station: P26

Event #: 42

Ship: TULLY

UTC Date (dd|mmm|yyyy): 05 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy Dil	Nut	Sat	Chl a	NH ₄						
1	419		1%	50	☒	☒	☒		☒							
2	420			30	☒	☒	☒		☒							OSU
3	421		10%	7	☒	☒	☒		☒							
4	422			5	☒	☒	☒		☒							OSU
5	423			+5ft	☒	☒	☒		☒							not sampled
6	424		55%	at sea	☒	☒	☒		☒							
7	425		100%			☒	☒		☒							not sampled
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s):
TDMK

Bottom Depth: 4220 m

Transmisso Cleaned: ☒ / N

Time	UTC	Local
Start	0210	1810
Bottom	0217	1817
End	0238	1838

Positional Information

Start

Lat: 50 ° 00.04 N

Lon: 144 ° 59.85 W

Bottom

Lat: 49 ° 59.95 N

Lon: 144 ° 59.75 W

End

Lat: 49 ° 59.89 N

Lon: 144 ° 59.57 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

③ DHS + UVIL + ONAR

Rosette Log

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

Cruise ID: 2009-03

Station: P26

Event #: 43/44

Ship: TULLY

UTC Date (dd|mmm|yyyy): 05 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments	
		Flask Serial #	Value mL * L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy DMSP	Nut	Sat HPLC	Chl a	PH ₂ DMSP ₂	DMSP ₄	DN	DAPI	FISH	N2O		
1	426			600	☒								✓	✓	✓	✓	
2	427			300	☒								✓	✓	✓	✓	
3	428			150	☒								✓	✓	✓	✓	
4	429			125	☒												ONAR
5	430			100	☒												ONAR
6	431			100	☒								✓	✓	✓	✓	
7	432			80	☒												ONAR
8	433			75	☒								✓	✓	✓	✓	
9	434			50	☒		✓	✓		✓							
10	435			40	☒												ONAR
11	436			40	☒		✓	✓		✓							
12	437			40	☒								✓	✓	✓	✓	
13	438			30	☒								✓	✓	✓	✓	
14	439			30	☒		✓	✓		✓							
15	440			25	☒		✓	✓	✓	✓							
16	441			20	☒								✓	✓	✓	✓	
17	442			20	☒		✓	✓		✓	✓	✓					
18	443			15	☒		✓	✓		✓							
19	444			10	☒								✓	✓	✓	✓	
20	445			10	☒		✓	✓	✓	✓							
21	446			5	☒												ONAR
22	447			5	☒		✓	✓	✓	✓	✓	✓					+ PHYTO
23	448			0	☒		✓	✓		✓	✓	✓					
24	449			0	☒								✓	✓	✓	✓	

Watchkeeper(s): TDMK

Bottom Depth: 4220 m

Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	<u>0315</u>	<u>1915</u>
Bottom	<u>0329</u>	<u>1929</u>
End	<u>0400</u>	<u>2000</u>

Positional Information

Start Lat: 49° 59.95 N

Lon: 144° 59.88 W

Start

Bottom Lat: 49° 59.94 N

Lon: 144° 59.92 W

Bottom

End Lat: 49° 59.78 N

Lon: 144° 59.53 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: 2009-03 Station: P26 Event #: 46 Ship: TULLY UTC Date (dd|mmm|yyyy): 05 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	450			2000												
2	451			2000												
3	452			2000												
4	453			2000												
5	454			2000												
6	455			2000												
7	456			2000												
8	457			2000												
9	458			2000												
10	459			2000												
11	460			2000												
12	461			2000												
13	462			500												
14	463			500												
15	464			500												
16	465			500												
17	466			500												
18	467			500												
19	468			500												
20	469			500												
21	470			500												
22	471			500												
23	472			500												
24	473			500												

Watchkeeper(s): TDHK /

Bottom Depth: 4220 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	<u>0723</u>	<u>2323</u>
Bottom	<u>0758</u>	<u>2358</u>
End	<u>0833</u>	<u>0033</u>

Positional Information

Start Lat: 49° 59.66 N
Lon: 144° 59.84 W

Start

Bottom Lat: 49° 59.58 N
Lon: 144° 59.93 W

Bottom

End Lat: 49° 59.58 N
Lon: 145° 00.08 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: 2009-03 Station: P26 Event #: 48 Ship: TULLY UTC Date (dd|mmm|yyyy): 05 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	474			3000	✓											
2	475			3000	✓											
3	476			2600	✓											
4	477			2600	✓											
5	478			2200	✓											
6	479			2200	✓											
7	480			2000	✓											
8	481			2000	✓											
9	482			1800	✓											
10	483			1800	✓											
11	484			1600	✓											
12	485			1600	✓											
13	486			1400	✓											
14	487			1400	✓											
15	488			1200	✓											
16	489			1200	✓											
17	490			1000	✓											
18	491			1000	✓											
19	491			800	✓											
20	492			800	✓											
21	493			600	✓											
22	494			600	✓											
23	495			400	✓											
24	496			400	✓											

Watchkeeper(s): H/J/A/J

Bottom Depth: 4220 m

Transmisso Cleaned: (Y) N

Time	UTC	Local
Start	<u>0927</u>	<u>0127</u>
Bottom	<u>1011</u>	<u>0211</u>
End		

Positional Information

Start Lat: 49 ° 59.82 N
Lon: 145 ° 00 35 W

Bottom Lat: 49 ° 59 90 N
Lon: 145 ° 00 85 W

End Lat: ° N
Lon: ° W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P26 Event #: 49 Ship: TULLY UTC Date (dd|mmm|yyyy): 05 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	497			1000	☒											
2	498			1000	☒											
3	499			1000	☒											
4	500			1000	☒											
5	501			1000	☒											
6	502			1000	☒											
7	503			1000	☒											
8	504			1000	☒											
9	505			1000	☒											
10	506			1000	☒											
11	507			1000	☒											
12	508			1000	☒											
13	509			300	☒											
14	510			250	☒											
15	511			200	☒											
16	512			175	☒											
17	513			150	☒											
18	514			10	☒											
19	515			10	☒											
20	516			10	☒											
21	517			10	☒											
22	-															
23																
24																

Watchkeeper(s): H/J/J/A

Bottom Depth: 4220 m

Transmisso Cleaned: ☒ / N

	Time	UTC	Local
Start		1143	03+3
Bottom		1200	0400
End		1223	0423

Positional Information

Start

Lat: 49 ° 59.74 N

Lon: 145 ° 02.18 W

Bottom

Lat: 49 ° 59.91 N

Lon: 145 ° 02.31 W

End

Lat: 50 ° 00.06 N

Lon: 145 ° 02.59 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: 2009-03

Station: P26

Event #: 50

Ship: TULLY

UTC Date (dd|mmm|yyyy): 5 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	518			300	☒											
2	519			300	☒											
3	520			275	☒											
4	521			275	☒											
5	522			250	☒											
6	523			250	☒											
7	524			225	☒											
8	525			225	☒											
9	526			200	☒											
10	527			200	☒											
11	528			175	☒											
12	529			175	☒											
13	530			150	☒											
14	531			150	☒											
15	532			125	☒											
16	533			125	☒											
17	534			100	☒											
18	535			100	☒											
19	536			75	☒											
20	537			75	☒											
21	538			50	☒											
22	539			50	☒											
23	540			25	☒											
24	541			25	☒											

Watchkeeper(s): H/I/I/A

Bottom Depth: 4220 m

Transmisso Cleaned: Y / N

Time	UTC	Local
Start	1332	0532
Bottom	1336	0536
End	1359	0559

Positional Information

Start Lat: 50° 00' .64 N
Lon: 145° 03' .30 W

Bottom Lat: 50° 00' .63 N
Lon: 145° 03' .30 W

End Lat: 50° 00' .67 N
Lon: 145° 03' .44 W

Oxygen Info For This Cast

Blank Value: _____ mL · L⁻¹

Std Value: _____ mL · L⁻¹

*Date Run: ____ | ____ | ____

Analyst: _____

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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P25 Event #: 54 Ship: TULLY UTC Date (dd|mmm|yyyy): 06 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken								Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ✓ Pressure	Oxy	Nut	Sal	Chl a	NH ₄	DK	pH		
1	542			2000	✓ 2005			✓			✓✓✓			
2	543				✓			✓			✓✓✓			
3	544				✓			✓			✓✓✓			
4	545				✓			✓			✓✓✓			
5	546				✓			✓			✓✓✓			Water flowing even if valve closed
6	547				✓			✓				✓✓		
7	548				✓			✓				✓✓		
8	549				✓			✓				✓✓		
9	550				✓			✓				✓✓		
10	551				✓			✓				✓✓		
11	552				✓									
12	553				✓									
13	554				✓									
14	555				✓									
15	556				✓									
16	557				✓									
17	558				✓									
18	559				✓									
19	560				✓									
20	561				✓									
21	562				✓									
22	563				✓									
23	564			2000	✓									
24	565			5			✓	✓	✓					

Watchkeeper(s): TRIMK

Bottom Depth: _____ m

Transmisso Cleaned: ☒ / N

	Time	UTC	Local
Start		0214	1814
Bottom		0245	1845
End		0317	1917

Positional Information

Start Lat: 49° 59.94 N
Lon: 143° 36.27 W

Bottom Lat: 49° 59.94 N
Lon: 143° 36.36 W

End Lat: 50° 00.03 N
Lon: 143° 36.37 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

Same As P22, P13, P16, P14
Rosette Log

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

Cruise ID: 2009-03 Station: P24 Event #: 55 Ship: TULAG UTC Date (dd|mmm|yyyy): 06 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	566			10												} UBL
2	567			10												
3	568			10												
4	569			10			✓	✓	✓							
5	570			5												NOT SAMPLED
6	571			5			✓	✓	✓							
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): TOM K

Bottom Depth: 3966 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	0722	2322
Bottom	0741	2341
End	0759	2359

Positional Information
Start Lat: 49° 50.24 N
Lon: 142° 40.07 W

Bottom Lat: 49° 50.12 N
Lon: 142° 40.05 W

End Lat: 49° 50.21 N
Lon: 142° 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: 2009-03 Station: P22 Event #: 57 Ship: J A TULLY UTC Date (dd|mmm|yyyy): 6 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	573			10	☒											} UBC
2	574			10	☒											
3	575			10	☒											
4	576			10	☒		☒	☒	☒							
5	577			5	☒											MT - NOT SAMPLED
6	578			5	☒		☒	☒	☒							
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H/M/K/K

Bottom Depth: 3290 m
Transmisso Cleaned: ☒ Y / ☐ N

Time	UTC	Local
Start	1633	0833
Bottom	1647	0847
End	1704	0904

Positional Information
Start
Lat: 49° • 42.01 N
Lon: 140° • 39.81 W

Bottom
Lat: 49° • 42.01 N
Lon: 140° • 39.82 W

End
Lat: 49° • 42.06 N
Lon: 140° • 39.07 W

Oxygen Info For This Cast
Blank Value: _____ mL • L⁻¹
Std Value: _____ mL • L⁻¹
*Date Run: ____ | ____ | ____
Analyst: _____
* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P 10 Event #: 59 Ship: TULLY UTC Date (dd|mmm|yyyy): 7 | 02 | 09

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL • L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	580			10	☒											
2	581			10	☒											
3	582			10	☒											
4	583			10	☒		✓	✓	✓							
5	584			5												
6	585			5			✓	✓	✓							
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): H J / A / S

Bottom Depth: 3289 m

Transmisso Cleaned: ☒ Y / ☐ N

	UTC	Local
Time Start	1019	0219
Bottom	1033	0233
End	1049	0249

Positional Information
Start Lat: 49 ° 26.07 N
Lon: 136 ° 40.05 W

Bottom Lat: 49 ° 26.02 N
Lon: 136 ° 39.97 W

End Lat: 49 ° 26.03 N
Lon: 136 ° 40.00 W

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

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

Water Properties Group

Rosette Log

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

Cruise ID: 2009-03 Station: P-14 Event #: 60 Ship: Tully UTC Date (dd|mmm|yyyy): 08 | Feb | 2009

Niskin #	Sample #	Oxygen Titrations		Rosette Operation		Samples Taken										Comments
		Flask Serial #	Value mL · L ⁻¹	Target Pressure	Confirmed ☒ Pressure	Oxy	Nut	Sal	Chl a	NH ₄						
1	586			10												
2	587			10												
3	588			10												
4	589			10		✓	✓	✓								
5	590			5												
6	591			5		✓	✓	✓								
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Watchkeeper(s): TDMK

Bottom Depth: 3310 m
Transmisso Cleaned: ☒ / N

	UTC	Local
Time Start	0426	2026
Bottom	0446	2046
End	0506	2106

Positional Information
Start Lat: 49°07.41 N
Lon: 132°40.00 W

Bottom Lat: 49°07.39 N
Lon: 132°40.03 W

End Lat: 49°07.41 N
Lon: 132°40.01 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