

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2010-12

DATE:

From: 25 MAY to: 4 JUNE 2010

VESSEL:

JOHN P TULLY

PROJECT(S):

WCVI - La Pérouse

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
Sidney, BC, Canada

Captain: ANDY QUAYE
Second Officer: SHANE LOWME
Fishing Master:
First Officer: DON GIBSON
Third Officer: PHANE

Mission Participants / Agencies: DFO / IOS - UBC-UVIC

Scientific Personnel:				Second leg of Mission:			
Name	Watch	Cabin	Chief Scientist:	Name	Watch	Cabin	Chief Scientist:
EUGENY PAKHANOVA	8-12	B	(A)	KELLY YOUNG	7-8	H	(B)
CHESSA STANLEY	12-4	G	(C)	PHILIPPE TOBIAS	4-8	G	(B)
NINA NEMER	DAYS	D		JOHN DACEY	12-4	G	(C)
LIZZY ASHER	8-12	D	(A)	DAN BEVAN	4-8	F	(B)
SCOTT ROSE	4-8	F	(C)	KANG WANG	12-4	F	(C)
DAYS							
KENDRA MEIER	8-12	H	(A)	MARIE ROBERT	8-12	A	(A)
HOLBA GALBRAITH	12-4	UP STB	(C)				

Data logging computer: CTD Cited Rock mount
Data acquisition program: Seacore v7
CTD deck unit make: SBE
CTD deck unit model: 11
CTD deck unit serial number: 0424

Primary CTD
Make: SBE
model: 9+
serial number: 0506
Primary temperature serial number: 2449
Primary conductivity serial number: 2280
Secondary temperature serial number: 2038
Secondary conductivity serial number: 3394
Transmissometer: Wetlab
Model: 1005DR
Fluorometer: Model Wetlab
Cable gain: 10x
Model: 43
Oxygen sensor: SBE
PAR sensor: BLOOMBERG
Model: 4694
Other sensors: s/n: 1176
P, S or NO pump? (P)
Other sensors: s/n: 2345
P, S or NO pump? (P)
Other sensors: s/n: 4694
P, S or NO pump?
Other sensors: s/n: 1176
P, S or NO pump?
Other sensors: s/n: 2345
P, S or NO pump?
Other sensors: s/n: 4694
P, S or NO pump?

Secondary CTD
Make: Not used
model: serial number:
Primary temperature serial number:
Primary conductivity serial number:
Secondary temperature serial number:
Secondary conductivity serial number:
Transmissometer: Model: s/n:
Fluorometer: Model: s/n:
Oxygen sensor: Model: s/n:
PAR sensor: Model: s/n:
Other sensors: s/n:
Other sensors: s/n:
Other sensors: s/n:
Other sensors: s/n:
Other sensors: s/n:
CTD calibration bottle location (height above CTD in metres):

Rosette Setup:

Number of bottles:

Manufacturer:

Volume of bottles (litres):

Winches:

1. Make:

Hubbell

Model:

589

Serial #: 17016

Used for:

Rosette

2. Make:

Hubbell

Model:

Serial #: 17027

Used for:

Hubbell/Bioses

3. Make:

Sum

Model:

Serial #: 1233

Used for:

not used (no hoses)

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

- leaky hoses on large winch, swapped w 1233 so didn't use

Salinometer:

Make:

Not used

Model:

Serial Number:

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Oxygen Kit(s):

Make:

- See Nina?

Model:

Kit Number:

Make:

Kit Number:

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

- excellent results (re. nina)

Thermosalinograph System (SBE21):

Program:

Version:

Sampling interval (seconds):

Fluorometer sensor serial number:

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

ADCP Setup:

Computer time zone:

User Exits: Name:

Exit points:

Sampling interval (sec):

Name:

Exit points:

Bin Length: (2^x):

Name:

Exit points:

Pulse Length:

Work File:

Buffer (bytes):

Gyro Offset:

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

CTD Test Cast Information

Test Cast along side?

Yes ☐

No ☒

Comments

Test Cast in Saanich Inlet or other location?

Yes ☒

No ☐

Pumps working?

Yes ☒ (0011)

No ☐ (0010)

CTD pressure reading on deck (db), before cast:

after cast:

Secondary Temp - Primary Temp:

(Average from the mixed region)

.001

Secondary Salinity - Primary Salinity:

(Average from the mixed region)

.010

Additional Comments:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month : MAY			Year 2010			Ship TULLY			Cruise ID 2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
26	ST03	0517	Be	ROS	US	1	48° 35.59	123° 30.02						✓	WISKIN 13-24 @ 0m. PAR ON
		0522	Bo				48° 35.59	123° 30.03	226	215	1-12	12			WROUNG GRAB IN HENDER
		0538	EN				48° 35.59	123° 30.06							
26	LB01	1653	Be	ROS	US	2	48° 40.45	124° 59.49						✓	
		1655	Bo				48° 40.46	124° 59.50	38	20	13-16	4	A-TEAM		
		1659	EN				48° 40.51	124° 59.54							
26	LB02	1726	Be	ROS	US	3	48° 39.00	125° 02.37						✓	
		1728	Bo				48° 39.01	125° 02.35	57	47	17-21	5	A-TEAM		
		1734	EN				48° 39.00	125° 02.34							
26	LB03	1804	Be	ROS	—	4	48° 37.32	125° 05.51	94				A-TEAM	✓	
		1808	Bo				48° 37.32	125° 05.52		85	—	Ø			
		1810	EN				48° 37.32	125° 05.53							
26	LB04	1839	Be	ROS	US	5	48° 35.69	125° 08.70	113				A-TEAM	✓	Btl 3 ready-
		1842	Bo				48° 35.70	125° 08.70		102	22-28	7			Water not clear
		1850	EN				48° 35.71	125° 08.70							
26	E1	1939	Be	ROS	—	1	48° 31.72	125° 03.73	117		—	Ø	C-STARS		
		1942	Bo				48° 31.72	125° 03.73		106					
		1944	EN				48° 31.72	125° 03.72							
Transmissometer to be cleaned before each cast. do not use Ammonia products															

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
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DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year		Ship		Cruise ID								
MAY			2010		TULLY		2010-12								
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
26	E1	19:51	BE	BN60		7	48°31.70	125°3.6	116		—	0	C-SIMS	✓	
		19:57	BO				48°31.705	125°3.68		106					
		19:59	BN				48°31.715	125°3.657							
26	LB05	20:57	BE	ROS		8	48°31.044	125°12.048	102		—	0	C-SIMS	✓	
		21:00	BO				48°31.052	125°12.001		90					
		21:02	BN				48°31.046	125°11.974							
26	LB04	21:35	BE	ROS		9	48°32.17	125°15.47	115		29.35	7	C-SIMS	✓	
		21:38	BO				48°32.21	125°15.46		105					
		21:46	BN				48°32.28	125°15.46							
26	C1	21:28	BE	ROS		10	48°28.92	125°15.21	152		—	0	C-SIMS		
		21:32	BO				48°28.76	125°15.17		142					
		21:38	BN				48°28.98	125°15.11							
26	C1	22:43	BE	BN60		11	48°28.98	125°15.03			—	0	C-SIMS		
		22:46	BO				48°28.965	125°15.009							
		22:57	BN				48°28.96	125°14.92							
26	C2	23:57	BE	ROS		12	48°26.19	125°9.19	160		—	0	SR	✓	Short pause @ 120m
27		00:00	BO				48°26.18	125°9.18		152					⇒ fix file
		00:04	BN				48°26.19	125°9.18							fixed boat

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Month May			Year 2010			Ship Tully			Cruise ID 2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
27	CZ	0013		Bongo		13	48° 26.18	125° 9.31	160	150			SR2		
							48°	125°							
							48°	125°							
27	C3	0126	BE	ROS		14	48° 23.47	125° 20.74	120		—	0	SR	✓	Swi file Fixed 0012
		0128	BO				48° 23.44	125° 20.71		113					
		0131	EN				48° 23.44	125° 20.72							
27	C3	0137	BE	BON60		15	48° 23.46	125° 20.71	120		—	—	SR		
		0145	EN												
27	LB07	0227	BE	ROS		16	48° 28.65	125° 22.04	155		—	—	SR	✓	Swi file 0013 Fixed
		0229	BO				48° 28.65	125° 22.04		148					
		0232	EN				48° 28.66	125° 22.05							
27	LB07	0244	BO	NET		17	48° 28.79	125° 22.11	155						
27	B8	0346	BE	ROS		18	48° 34.50	125° 30.01	120		—	Ø			A-TEAM ✓
		0350	BO				48° 34.51	125° 30.06		110					
		0352	EN				48° 34.51	125° 30.06							Bongo.
27	B8	0359	BE	NET		19	48° 34.51	125° 29.98	120						
		0402	BO				48° 34.50	125° 29.96		110					
		0405	EN				48° 34.49	125° 29.91							

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MAY			2010			TULLY			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
27	B7	0448	BE	ROS	—	20	48° 32.02	125° 35.47	80		—	Ø	A-TEAM	✓	
		0450	BO				48° 32.03	125° 35.51		70					
		0452	EN				48° 32.03	125° 35.51							
27	B7	0458	BE	NET		21	48° 31.99	125° 35.40	80						
		0500	BO				48° 31.97	125° 35.37		70					Bouge to 70
		0502	EN				48° 31.96	125° 35.35							
27	LB08	0603	BE	ROS	US	22	48° 25.33	125° 28.60	145				A-TEAM	✓	→
		0607	BO				48° 25.28	125° 28.59	138	130	36-44	9			
		0617	EN				48° 25.28	125° 28.65							
27	LB08	0625	BE	NET		23	48° 25.29	125° 28.64							
		0628	BO				48° 25.30	125° 28.64							
		0631	EN				48° 25.31	125° 28.63							
27	LB07	0710	BE	ROS	US	24	48° 21.91	125° 34.80	152		45-52	8	CSMRS	✓	Robot to start activating →
		0733	BO				48° 21.97	125° 34.79		140					
		0746	EN				48° 21.97	125° 34.78							
27	LB10	0832	BE	ROS	—	25	48° 18.52	125° 41.43	185		—	9	CSMRS	✓	
		0837	BO				48° 18.52	125° 41.43		145					
		0840	EN				48° 18.52	125° 41.42							

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Funny signal @ 100 dbm on way up Check CITE values. Same in salinity.

→ Because you need to let out first upcast (there will be no up ~~into~~ down, then up)

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Month			Year			Ship			Cruise ID						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
21	LB11	0925	BE	ROS		21	48°15.20	125°41.71		206	53 63	11	C-SMS	✓	
		0929	BO				48°15.21	125°41.72	195						
		0942	EN				48°15.23	125°41.75							
21	LB11	0954	BE	ROKRO		21	48°15.24	125°41.76					C-SMS		
		0959	BO				48°15.23	125°41.75							
		1003	EN				48°15.24	125°41.77							
21	LB12	1040	BE	ROS		28	48°12.91	125°51.97		512	64-78 ⁷⁹	16	C-SMS		B11 7 hr LNUO
		1050	BO				48°12.95	125°52.00	502						
		1113	EN				48°12.99	125°52.03							
21	LB13	1205	BE	ROS		29	48°10.60	125°56.09	810		—	—	SIR		
		1223	BO				48°10.65	125°56.09		800					
		1238	EN				48°10.60	125°56.17							
27	LB14	1311	BE	ROS	US	30	48°8.45	126°0.02	1190		80-97				PAL OFC Arriving started @ 5m on down cast (Sunny)
		1330	BO				48°8.50	126°0.04		1183					#16 not fired
		1356	EN				48°8.48	126°0.08							
27	LB15	1457	BE	ROS	US	31	48°04.39	126°08.40						✓	1 NISRU @ 5 m.
		1525	BO				48°04.35	126°08.48		1550	98	1			Stop @ 295 f change driver.
		1548	EN				48°04.36	126°08.49							P

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MAY			2010		TULLY		2010-12								
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
27	LC16	1650	BE	ROS		32	48°00.53	126°17.01	1785		99	1			NISK @ 5 + Loop oxy, CHL, SAL, NUT.
		1719	BO				48°00.50	126°16.97		1815					
		1738	EN				48°00.51	126°17.00							
27	LC12	2030	BE	ROS		33	48°15.02	126°39.98	2005						
		2107	BO				48°15.02	126°39.99		2000	100-107	8			
		2140	EN				48°14.95	126°40.00							
27	LC12	2153	BE	BOU60		34	48°15.03	126°40.13							
		2157	BO				48°15.02	126°40.13							
		2200	EN				48°14.95	126°39.99							
	LC12	2216		BIGN		35									
						36									
28	LC11	0041	BE	ROS		37	48°18.91	126°26.65	1499		108-126	19	SR	✓	
		0109	BE				48°18.87	126°26.82		1490					
		0147	EN				48°18.93	126°26.66							
28	LC10	0	BE	ROS		38	48°22.	126°20.	1243				SR	✓	ISG remote temp
		0259	BO				48°22.44	126°20.23		1240					probe removed for
		0320	EN				48°22.55	126°20.13							service while en station
															Close @ NISK @ 1240
															NO Sample # →

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WaterProperties.ca Version: 06 March 2008

0300 UTC: TSG remote TO back in action.
8 N154: last minute request, labels already made for next cast.

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M A I			2010			TULCY			2010-12						
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							Latitude	Longitude							
28	LC09/A3	0407	Be	ROS	US	39	48°25.86	126°13.71	615				A-Team	✓	
		0419	Bo				48°25.87	126°13.64	610	600	127-142	16			
		0441	EN				48°25.85	126°13.73							
28	LC09/A3	0450	Be	NET	—	40	48°25.1	126°13.68							Bouge to 250
		0455	Bo				48°25.74	126°13.72							
		0458	EN				48°25.65	125°66.71							
28	A2	0559	Be	—	—	41	48°22.70	126°03.60	351				A-Team	✓	
		0607	Bo				48°22.71	126°03.86		340	—	Ø			
		0614	EN				48°22.65	126°03.92							
28	A2	0620	B	NET	—	42	48°22.65	126°03.97	353						Bouge to 250m
		0629	Bo				48°22.71	126°03.99		250					
		0634	EN				48°22.76	126°03.96							
28	LC08	0742	Be	215	US	43	48°29.80	126°07.11	202		143-153	11	Csnes	✓	
		0746	Bo				48°29.31	126°07.12		192					
		0759	EN				48°29.33	126°07.21							
28	LC08	0812	Be	NET		44	48°29.46	126°07.05			—	—	Csnes		Bouge to 250m
		0821	Bo				48°29.47	126°07.09		195					
		0823	EN				48°29.45	126°07.13							

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							Latitude	Longitude							
28	LC07	0917	BE	ROS		45	48°32.92	126°00.49	130		—	0	CSMS	✓	
		0920	BO				48°32.92	126°00.51		120					
		0923	BN				48°32.92	126°00.54							
28	LC02	1011	BE	ROS		46	48°36.42	125°58.99	94		154-160	7	CSMS	✓	
		1018	BO				48°36.42	125°54.01		84					
		1027	BN				48°36.44	125°54.02							
28	LC02	1043	BE	NET		47	48°36.45	125°53.76	93		—	0	CSMS		
		1044	BO				48°36.45	125°53.75		85					
			BN				48°36.43	125°54.01							
28	LC05	1146	BE	ROS		48	48°39.89	125°47.39	63		—	—	SR	✓	odd nage from LARS
		1146	BO				48°39.91	125°47.38		54					@ start
		1147	BN				48°39.92	125°47.38							Blowing 30 + Bango's
28	LC05	1207	BE	ROS		49	48°39.93	125°47.37	63		161	1	SR	✓	aborted
		1208	BO				48°39.93	125°47.39		50					LC 05 done over
		1210	BN				48°39.93	125°47.45							to get missed bottles
28	LC04	1300	BE	ROS		50	48°43.44	125°40.80	165		162-170	9	SR	✓	
		1303	BO				48°43.46	125°40.82		150					
		1314	BN				48°43.50	125°40.79							
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- NET = Plankton Net Haul
- DRF = Drifter

Bottle Firing Method:

- US = Up / Stop
- UN = Up / No stop
- DN = Down / No stop
- BE = Beginning Time of Cast
- BO = Bottom Time of Cast
- EN = End Time of Cast
- DE = Deployment Time
- MR = Messenger Release Time
- RE = Recover Mooring Time

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

Produced by the Water Properties Group, IOS

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
MAY			2010			TULLY			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
28	LC03	1411	BE	ROS		51	48° 46.95	125° 34.22	132	120	171	1	SR		5m bottle for Flygery
		1414	BO				48° 46.98	125° 34.17							
		1418	EN				48° 46.97	125° 34.22							
28	LC02	1449	BE	ROS		52	48° 48.68	125° 31.00	109		172-178	7	A-TEAM	✓	
		1452	BO				48° 48.70	125° 31.03		95					
		1501	EN				48° 48.70	125° 31.08							
28	LC01	1530	BE	ROS		53	48° 50.49	125° 27.76	95		179-185	7	A-TEAM	✓	
		1533	BO				48° 50.48	125° 27.73							
		1541	EN				48° 50.41	125° 27.74							
28	LD01	1743	BE	ROS		54	48° 59.86	125° 44.24	40		186-189	4	A-TEAM	✓	
		1744	BO				48° 59.87	125° 44.23		28					
		1749	EN				48° 59.87	125° 44.23							
28	LD02	1819	BE	ROS		55	48° 58.37	125° 47.05	43		190-193	4	A-TEAM	✓	
		1821	BO				48° 58.38	125° 47.07							
		1826	EN				48° 58.36	125° 47.08							
28	LD02	1838	BE	BON		56	48° 58.40	125° 46.99					A-TEAM		
		1840	BO				48° 58.40	125° 46.99							
		1841	EN				48° 58.41	125° 46.98							

Cast Type: USW = Sea Water Loop Bottle Firing Method: US = Up / Stop Time Code: BE = Beginning Time of Cast DE = Deployment Time

MOR = Mooring UN = Up / No stop BO = Bottom Time of Cast MR = Messenger Release Time

CTD = CTD without Rosette DN = Down / No stop EN = End Time of Cast RE = Recover Mooring Time

ROS = Rosette plus CTD DRF = Drifter Notes: Transmissometer to be cleaned before each cast, do not use Ammonia products

SET = Fish Set Produced by the Water Properties Group, 105 Water Properties.ca Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month March Year 2010 Ship TULLY Cruise ID 2010-17

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
28	LDO3	1920	BE	ROS	—	57	48° 56.71	125° 50.32	48		—	16	CSTMS	✓	
		1921	BO				48° 56.71	125° 50.32		38					
		1922	EN				48° 56.70	125° 50.33							
28	LDO4	2018	BE	ROS	US	58	48° 53.20	125° 51.07	63		194-198	5	CSTMS	✓	Went back to 30m when back to 63m
		2024	BO				48° 53.21	125° 51.04		53					
		2026	EN				48° 53.22	125° 51.07							
28	LDO4	2033	BE	NET	—	59	48° 53.18	125° 51.16					CSTMS		
		2041	BO				48° 53.18	125° 51.13							
		2045	EN				48° 53.19	125° 51.17							
28	LDO5	2139	BE	ROS	—	60	48° 49.66	126° 03.61	92	92	—	—	CSTMS	✓	
		2141	BO				48° 49.67	126° 03.65		80					
		2143	EN				48° 49.71	126° 03.69							
28	LDO6	2231	BE	ROS	UK	61	48° 46.21	126° 10.12	137		199,204	8	CSTMS	✓	
		2239	BO				48° 46.21	126° 10.15		127					
		2248	EN				48° 46.24	126° 10.21							
28	LDO7	2344	BE	ROS		62	48° 42.76	126° 16.71	571db		—	0			
		2355	BO				48° 42.75	126° 16.75		560					
24		0005	EN				48° 42.79	126° 16.70							

Cast Type: BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

Transmissometer to be cleaned before each cast, do not use Ammonia products
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Produced by the Water Properties Group, IO5

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			M A I			Year			2010			Ship			TULLY			Cruise ID			2010-12		
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments								
							Latitude	Longitude															
29	LD08	0107	BE	ROS		63	48° 39.13	126° 23.29	753		207-222	16	SR	✓	bottle I didn't trip								
		0122	BO				48° 39.14	126° 23.21		745					possible set-up error								
		0151	EN				48° 39.11	126° 23.05															
29	LD09	0257	BE	ROS		64	48° 35.68	126° 30.02			223-239	17	A-TEAM	✓	RAE OFF								
		0315	BO				48° 35.64	126° 30.08	1053														
		0347	EN				48° 35.67	126° 30.18		1050													
29	LD09	0356	BO	NE		65	48° 35.66	126° 30.12	1050						Bump to 250m								
		0405	BO				48° 35.65	126° 30.20		250													
		0411	EN				48° 35.61	126° 30.23															
29	LD10	0501	BE	ROS		66	48° 32.16	126° 36.67	1473				A-TEAM										
		0527	BO				48° 32.07	126° 36.84		1475	-			✓									
		0550	EN				48° 32.05	126° 36.96															
29	LD11	0650	BE	ROS		67	48° 28.14	126° 41.03	1593														
		0715	BO				48° 28.15	126° 41.96			240-259	20		✓									
		0751	EN				48° 28.80	126° 42.96															
29	LG01	1248	BO	NET		68	48° 51.34	127° 19.14	2057	250													
29	LG09	1308	BE	ROS		69	48° 51.23	127° 19.33			260-280	21		✓									
		1343	BO				48° 51.16	127° 19.40		2005													
		1434	EN				48° 51.15	127° 19.44															

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

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

Notes:

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Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
MAY			2010			TULLY			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
29	L608	1526	BE	ROS	US	70	48° 55' 34"	127° 13' 11"	2061				ATEM	✓	7 @ 2005 Torkli 1 @ 5 Pakhomut
		1557	BO				48° 55' 28"	127° 13' 30"		2005	281-288	8			5m { oxy, nut, chl, sal. Loop } Ship @ 2100 switch on
		1627	EN				48° 55' 28"	127° 13' 29"							
29	L608	1647	BE	NET		71	48° 55' 27"	127° 13' 34"	2063				CSMS		Multinet
		1753	BO				48° 55' 32"	127° 13' 26"		2000					
		1842	EN				48° 55' 34"	127° 13' 31"							
29	L607	1945	BE	ROS		72	48° 59' 35"	127° 07' 12"	1767				CSMS		Chelera unwound
		2015	BO				48° 59' 39"	127° 07' 23"		1750					if the altimeter
		2041	EN				48° 59' 39"	127° 07' 25"							is working
29	L607	21	BE	NET		73			1767				CSMS		
		2100	BO				48° 59' 40"	127° 07' 18"							
		21	EN												
29	L606	2155	BE	ROS		74	49° 03' 51"	127° 01' 16"	910		289-305	17	CSMS		
		2210	BO				49° 03' 50"	127° 01' 21"		950					
		2243	EN				49° 03' 50"	127° 01' 30"							
29	L605	2334	BE	ROS		75	49° 07' 43"	126° 55' 40"	279		306	1	SRZ	✓	Altimeter working
		2339	BO				49° 07' 41"	126° 55' 36"		272					perfectly!
		2345	EN				49° 07' 40"	126° 55' 28"							

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

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

Notes:

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Ops: up to 1400, then back down to 1500 to done 7 risks.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 13 of

Month		Year		Ship		Cruise ID								
MA		2010		TULLY		2010-12								
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information	Bottom	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude	Depth					
30	LG04	0041	BE	ROS		76	49° 11.30	126° 49.34	145	307-314	8	SR	✓	
		0043	BO				49° 11.30	126° 49.32	135					
		0054	EN				49° 11.31	126° 49.41						
30	LG04	0120	BO	NET		77	49° 11.21	126° 49.38	145	135	—	SR		
30	LG03	0207	BE	ROS		78	49° 14.95	126° 43.74		315	1	SR		PAR back on
		0211	BO				49° 14.98	126° 43.82						
		0214	EN				49° 14.99	126° 43.91						
30	LG02	0301	BE	ROS	US	79	49° 18.72	126° 38.11	100	316-322	7	A-Team	✓	+1000 R. CTD, NUT, SAT, OXY
		0304	BO				49° 18.71	126° 38.12	90					
		0312	EN				49° 18.69	126° 38.12						
30	LG02	0319	BE	NET		80	49° 18.71	126° 38.06	100			A-Team		Bongo h 80
		0322	BO				49° 18.70	126° 38.09	90					
		0324	EN				49° 18.70	126° 38.14						
30	LG01	0353	BE	ROS		81	49° 20.86	126° 34.94	50	323-329	7	A-Team	✓	
		0355	BO				49° 20.55	126° 34.97	41					
		0400	EN				49° 20.53	126° 35.05						
30	LB01	1055	BE	POS		82	50° 4.81	127° 52.77	51	330-331	2	SR	✓	
	LB01	1057	BO				50° 4.82	127° 52.77	45					
		1059	EN				50° 4.81	127° 52.78						

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Code:

Page 12 of 101

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
=

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

Transmissometer to be cleaned before each cast, do not use Ammonia products
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Notes:

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Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 14 of

Month			Year			Ship			Cruise ID						
MAY			2010			TULLY			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
30	LBP2	1119	BE	ROS		83	50°4.06	127°54.33	92		382	1	SR	✓	
		1122	BO				50°4.05	127°54.33		85					
		1124	BN				50°4.07	127°54.36							
30	LBP2		BE	NET		81							SR		
		1139	BO				50°3.99	127°54.20	98	83			SR		
		1142	EN												
30	LBP3	1205	BE	ROS		85	50°3.21	127°55.45	171		333-342	10	SR	✓	PAR OFF
		1209	BO				50°3.19	127°55.43		167					
		1223	EN				50°3.19	127°55.51							
30	LBP3		BE	NET		86							SR		
		1235	BO				50°3.19	127°55.51	171						
			EN							162					
30	LBP4	1322	BE	ROS		87	50°1.40	127°58.18			343-344	2	SR		
		1343	BO				50°1.36	127°58.10							
		1401	EN				50°1.39	127°58.11							
30	LBP05	1500	BE	ROS		88	50°00.01	128°00.02	1280		345-362	18	A. TEAM	✓	SMO @ 1600 & Smith's operator
		1526	BO				50°00.05	127°59.95		1276					
		1600	EN				50°00.01	127°59.92							

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

Cast Type: BOT = Bottle cast, no CTD CTD = CTD without Rosette ROS = Rosette plus CTD

USW = Sea Water Loop MOR = Mooring NET = Plankton Net Haul DRF = Drifter

Bottle Firing Method: US = Up / Stop UN = Up / No stop DN = Down / No stop

Time Code: BE = Beginning Time of Cast BO = Bottom Time of Cast EN = End Time of Cast

DE = Deployment Time MR = Messenger Release Time RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year		Ship		Cruise ID								
MAY			2010		TULLY		2010-12								
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude	Depth						
30	LBP5	1616	BE	NET		89	50° 00.01	128° 00.02		260			A-TEAM		Bongo to 250
			BO						250						
	1	1631	EN				50° 00.03	127° 59.8317							
30	LBP6	1725	BE	ROS	US	90	49° 56.25	128° 05.39	778				A-TEAM	✓	WIDE 5m for Oxy
		1746	BO				49° 56.25	128° 05.29		820	363-364	2			NOT cur SAL + LOOP
		1804	EN				49° 56.17	128° 05.38							→
30	LBP7	1947	BE	ROS	US	91	49° 52.38	128° 11.06	297		365-385	21	C-STAR	✓	
		2014	BO				49° 52.52	128° 10.69		2000					
		2110	EN				49° 52.78	128° 11.01							
30	LBP8	2229	BE	ROS	US	92	49° 48.64	128° 16.76	2074		386-396	11	C-STAR	✓	Trip mechanism swapped out after
		2310	BO				49° 48.78	128° 16.51		2000					cast CR
		2345	EN				49° 48.79	128° 16.41							
31	CPE2	0602	BE	ROS	US	93	50° 43.04	128° 39.79	171				A-TEAM	✓	Bottle @ 5m for Eucery.
		0605	BO				50° 43.04	128° 39.77	126	115	397	1			
		0610	EN				50° 43.03	128° 39.79							
31	CPE2	0619	BE	NET		94	50° 43.02	128° 39.82					A-TEAM		Bongo to 15
		0623	BO				50° 43.06	128° 39.71	126						
		0625	EN				50° 43.09	128° 39.68		115					

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
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MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:
US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:
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BO = Bottom Time of Cast
EN = End Time of Cast

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

Notes:

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Version: 06 March 2008

From now on: same depth @ Midline 1 and 2 because of low survey must - trip #1

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		Year		Ship		Cruise ID									
May		2010		TULLY		2010-12									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
31	1803	0617	HE	ROS	—	95	50° 31' 75	129° 01' 94	1202-1214	1175	—	1	CSTW		Very variable bottom readings
		0835	BO				50° 31' 73	129° 01' 89							
		0850	EN				50° 31' 69	129° 01' 94							
31	1803	0902	BE	NET	—	96	50° 39' 30	129° 02' 01	1250				CSTW		
		0909	PA				50° 39' 72	129° 02' 11		250					
		0913	EN				50° 39' 71	129° 02' 24							
		1034	BE	LA		91	50° 31' 86	129° 17' 35	1360		—	—	CSTW		
31	2122	1101	BO				50° 39' 85	129° 17' 44		1350			STR		
			EN				50° 39' 81	129° 17' 37							
31	2122		BE	NET		98			1380		—	—	SR		
		1142	BO				50° 39' 86	129° 17' 46		250					
			EN												
31	CS00	1559	BE	ROS		99	50° 27' 65	129° 55' 08	2175				A-Tech	✓	
		1628	BO				50° 27' 66	129° 55' 26		2007	398-417				
		1715	EN				50° 27' 48	129° 55' 04							
31	CS00	1726	BE	NET		100	50° 27' 63	129° 55' 07	2172						Bouys to 250
		1731	BO				50° 27' 61	129° 53' 17		250					
		1735	EN				50° 27' 60	129° 55' 23							

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

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

Cast Type:

BOT = Bottle cast, no CTD

CTD = CTD without Rosette

ROS = Rosette plus CTD

SET = Fish Set

USW = Sea Water Loop

MOR = Mooring

NET = Plankton Net Haul

DRF = Drifter

Bottle Firing Method:

UN = Up / Stop

UN = Up / No stop

DN = Down / No stop

Time Code:

BE = Beginning Time of Cast

BO = Bottom Time of Cast

EN = End Time of Cast

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

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Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		June		Year		2010		Ship		Tully		Cruise ID		2010-12	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
1	CS03	0059	Bo	NET		107	50°45.57	129°19.99	242	232		—	SR		PAR Behn
1	CS04	0153	BE	ROS		108	50°49.21	129°13.03	95				SR		CS04
		0155	Bo				50°49.22	129°13.04		90					
		0202	EN				50°49.24	129°13.04							
	CS04	0210		NET		109	50°49.24	129°13.04	96	86		—	SR		
1	CS3B	0358	BE	ROS	—	110	51°00.00	129°27.06	220				A-TEAM	✓	→
		0402	Bo				51°00.02	129°26.98		210		—			
		0406	EN				51°00.00	129°26.93				∅			
1	CS3B	0413	BE	NET		111	51°00.02	129°26.96	220						210
		0418	Bo				51°00.06	129°27.03		210					
		0422	EN				51°00.09	129°27.09							
1	CS05	0627	BE	ROS		112	50°56.02	129°00.01	64				A-TEAM	✓	
		0629	Bo				50°56.03	129°00.04		53		∅			
		0630	EN				50°56.03	129°00.06							
1	CS05	0637	BE	NET		113	50°56.04	128°59.93	64				A-Team		Bongo
		0639	Bo				50°56.04	128°59.93		52					
		0640	EN				50°56.05	128°59.95							

Cast Type:

BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop

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DRF = Drifter

Bottle Firing Method:

US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Time Code:

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BO = Bottom Time of Cast
EN = End Time of Cast

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

DE = Deployment Time
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RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

Remove all files 102 to 108 $\Rightarrow$ 0102 to 0108 me

Ocean Sciences Division, Institute of Ocean Sciences

Page 19 of

Month		Year		Ship		Cruise ID		Page							
June		2010		Nelly		2010-12		19 of							
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
1	CS1B	08:11	BE	Ros	—	114	50° 53.01	128° 39.88	75		—	8	CSMS	✓	
		08:13	BO				50° 53.01	128° 39.87		65					
		08:15	BO				50° 52.99	128° 39.86							
1	CS1B	08:22	BE	NET	—	115	50° 52.96	128° 39.87			—	8	CSMS	—	
		8:24	BO				50° 52.96	128° 39.86							
		8:25	BO				50° 52.95	128° 39.86							
1	CS06	09:43	BE	Ros	VS	116	51° 00.03	128° 51.85	66		444-449	6	CSMS	✓	on 2 files
		09:44	BO				51° 00.02	128° 51.85		54					
		09:52	EN				50° 54.95	128° 51.85							
1	BSM	10:08	BE	NET	—	117	51° 00.08	128° 51.96			—	—	CSMS		CSMS CSMS
		10:10	BO				51° 00.07	128° 51.97							
		10:12	EN				51° 00.06	128° 51.98							
1	CS01	11:09	BE	Ros		118	51° 4.47	128° 43.80							
		11:09	BO				51° 4.41	128° 43.95							
		11:10	EN				51° 4.46	128° 43.96							
1	CS01	11:21	BE	NET		119	51° 4.31	128° 43.84	67						
		11:22	BO				51° 4.28	128° 43.89		57					
		11:23	EN				51° 4.30	128° 43.88							

Cast Type:

BOT = Bottle cast, no CTD

CTD = CTD without Rosette

ROS = Rosette plus CTD

USW = Sea Water Loop

MOR = Mooring

NET = Plankton Net Haul

Bottle Firing Method:

US = Up / Stop

UN = Up / No Stop

Time Code:

BE = Beginning Time of Cast

DE = Deployment Time

Transmissometer to be cleaned before each cast

Cast Type:
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Bottle Firing Method:
 US = Up / Stop
 UN = Up / No stop
 DN = Down / No stop

Time Code:
 BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Produced by the Water Properties Group, IOS

→ Comp crashed @ 50 m on upcast.

DAILY SCIENCE LOG

Month June

Year 2010

Ship TULLY

Cruise ID 2010-12

Page 0 of

Ocean Sciences Division, Institute of Ocean Sciences

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom		Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude	Depth	Max Depth					
1	CS08	1219	BE	ROS		120	51° 8.50	128° 35.99	145		—	—	SR	✓	
		1221	BO				51° 8.48	128° 35.98		139					
		1224	EN				51° 8.49	128° 35.96							
1	CS08		BE	NET		121									
		1236	BO				51° 8.14	128° 36.32	145						
			BN												
1	CS09	1329	BE	ROS		122	51° 12.45	128° 28.00	194		450-460	11	SR	✓	Bot 4+5 didn't trip
		1332	BO				51° 12.50	128° 27.99		186					due to lanyard side
		1345	BN				51° 12.52	128° 27.95							loading
1	CS09		BE	NET		123	51° 12.16	128° 27.62							
		1400	BN				51° 12.16	128° 27.62							
			BN												
1	CS10	1504	BE			124	51° 16.50	128° 20.10	80						
		1506					51° 16.51	128° 20.11		70	—	0			
		1508	EN				51° 16.52	128° 20.12							
1	CS10	1515	BE	NET		125	51° 16.53	128° 20.0	80						
		1517	BO				51° 16.54	128° 20.09		70					
		1518	EN				51° 16.53	128° 20.09							

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

Produced by the Water Properties Group, IOS

Month **JUN** Year **2010**

Ocean Sciences Division, Institute of Ocean Sciences

Page **21** of **21**

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
1	M6	1830	BE	ROS	US	126	51°42.66	128°07.41	246						
		1834	BO				51°42.66	128°07.43		235	461-462	2	A Team	✓	Sm Nisk For Lizzy
		1841	EN				51°42.63	128°07.46							
1	M5	1910	RE	ROS	US	127	51°43.46	128°03.67	337		463	1	C-SMA	✓	Sm Nisk for
		1915	BO				51°43.43	128°03.67		327					4 Loop
		1923	EN				51°43.40	128°03.61							
1	M4	1953	BE	ROS	US	128	51°44.64	128°00.23	430		464	1	C-SMA	✓	"
		2001	BO				51°44.68	128°00.21		426					"
			EN				51°44.64	128°00.21							
1	M3	2050	RE			129	51°45.27	127°54.52	325		465	1	C-SMA	✓	"
		2055	BO				51°46.30	127°54.57		315					"
		2102	EN				51°46.32	127°54.59							
1	M2	2138	RE			130	51°46.45	127°53.23	181		466	1	C-SMA	✓	"
		2142	BO				51°46.45	127°53.22		170					
		2145	EN				51°46.45	127°53.22							
2	M6L7	0005	BE	ROS	US	131	51°36.01	127°48.85	160		467-468	2	SMA	✓	
		0007	BO				51°30.03	127°49.05		151					
		0016	EN				51°30.02	127°49.04							
2	UB3	0040	B	NET		132	51°30.02	127°49.04	162						

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

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences)

Month			Time			Year			Ship			Cruise ID			Page		
June			2010			TULCY			2010-12			22 of					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments		
							Latitude	Longitude									
2	Ri1	0208	BE	ROS		133	51°26.40	127°38.15	332		489-490	2	SR	✓	Bot 1 deployed trip		
		0214	BO				51°26.41	127°38.15		325					laundry has been		
		0221	EN				51°26.40	127°38.12							retentioned		
2	Ri1	0242	BO			134	51°26.46	127°38.04	323	300			SR				
2	Ri2	0338	BE	ROS	US	135	51°31.26	127°33.59	332		491-514	24	ATeam	✓			
		0345	BO				51°31.25	127°33.59		320							
		0408	EN				51°31.23	127°33.52									
		0416	BE	NET		136	51°31.23	127°33.48									
2	Ri2	0425	BO				51°31.24	127°33.43		300					Borgo to 320		
		0430	EN				51°31.23	127°33.38									
	Ri2	0445	BE	MPS		137	51°31.331	127°33.40	333	320					multiple plankton net		
		0500	BO				51°31.40	127°33.398							5 nets		
		0508	EN				51°31.46	127°33.37									
	Ri2	0549	BE	BOV		138	51°31.867	127°33.162	333	300							
			BO														
		06:29	EN				51°33.782	127°32.597	326								
	Ri3	0731	BE	LOS	US	129	51°35.88	127°32.06		315	515-SR	4	CSMS		Bot 1 did not		
		0737	BO				51°35.87	127°32.11							five - first		
		0746	EN				51°35.87	127°32.14							A closed 2-4		

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Time Code: BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

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MR = Messenger Release Time
RE = Recover Mooring Time

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

→ Recast on file 0139-30m.

→ 4 did not trip either

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
JUNE			2010			Tully			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
2	R13	08:02	BE	NET		140	51°35.87	127°32.13	326.		—	—	CSPW		
		08:12	BO				51°35.89	127°32.14		320.					
		08:17	BN				51°35.90	127°32.14							
2	R14	09:13	BE	ROS		141	51°38.87	127°26.78	301		519-521	—	CSPW	✓	-TRIP 2 BINS
		09:19	BO				51°38.894	127°26.78		290					@ 30m.
		09:26	BN				51°38.90	127°26.78	301						
2	R14	09:33	BE	NET		142	51°38.91	127°26.77		290.	—	—	CSPW		
		09:40	BO				51°38.92	127°26.77							
		09:45	BN				51°38.92	127°26.76							
2	R15	10:33	BE	LOS		143	51°40.71	127°19.90	201		522-545	24	CSPW	✓	WRO
		10:36	BO				51°40.70	127°19.88		190					ON LABS
		10:58	BN				51°40.72	127°19.85							(991-)
2	R15	11:15	BO	NET		144	51°40.64	127°19.78	201	190	—	—	SR		
		11:33	BE	MPS		145									
		11:33	BO				51°40.691	127°19.858							
		12:01	BN				51°40.662	127°19.852							
2	R16	12:29	BE	ROS		146	51°40.52	127°17.00	147		546-547	2	SR		
		12:32	BO				51°40.51	127°16.99		137					
		12:37	BN				51°40.50	127°16.98							

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Notes:

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Version: 06 March 2008

Month			Year			Ship			Cruise ID						
JUN			2010			TULLY			2010-12						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
2	Rib	1258	BO	NET		147	51°40.50	127°16.98	147		—	—	SR		
2	SS7	1542	BE	ROS	US	148	51°24.68	127°47.57	124				A-Team	✓	5m NISX + loop OXY, CHL, WT, SAC
		1545	BO				51°24.68	127°47.53		114	548	1			
		1548	EN				51°24.69	127°47.55							
2	SS6	1659	BE	ROS	US	149	51°20.02	128°00.00	177				A-Team	✓	5m NISX + loop OXY, SAC, WT, CHL
		1703	BO				51°20.01	127°59.96		165	549	1			
		1707	EN				51°20.02	128°00.02							Pump & file off out of water
2	SS6	1717	BE	NET		150	51°20.05	128°00.22	179						
		1720	BO				51°20.03	128°00.26		165			A-Team		Bongo
		1723	EN				51°20.03	128°00.28							
2	SS5	1945	BE	ROS	US	151	51°28.03	128°30.00	199						
		1950	BO				51°27.97	128°29.91		190	550-551	21	C-SYNTH	✓	5m NISX + loop OXY, CHL, WT, SAC
		1955	BO				51°27.99	128°29.91							+ one L1 & L12
2	SS4	2028	BE	ROS	US	152	51°20.99	129°00.02	240		552	1	C-SYNTH	✓	5m NISX + loop OXY, CHL, WT, SAC
		2032	BO				51°20.99	128°59.98		230					
		2039	BO				51°20.99	129°00.03							
2	SS4	2219	BE	NET	US	153	51°20.96	129°00.04							
		2232	BO				51°20.96	128°59.97							
		2235	BO				51°20.97	128°59.92							

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Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month June			Year			Ship			Cruise ID						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
3	SS03	0100	BE	ROS		154	51°15.04	129°21.26	292		553	1	SR		1 bot @ 5m
		0105	BO				51°15.02	129°21.21		285					
		0111	EN				51°15.00	129°21.25							
3	CPE1	0730	BE	ROS		155	51°00.019	127°49.91	150		554	1	CS	✓	
		0733	BO				51°00.05	127°49.93		140					
		0737	EN				51°00.01	127°49.91							
	CPE1	08:05	BE	NET		156	51°00.14	127°49.92	150				CRS		
		08:09	BO				51°00.13	127°49.91		130					
		08:11	EN				51°00.11	127°49.91							
4	DK01	0425	AE	ROS		157	49°14.92	123°44.964	401		5		CS	✓	
		0432	BO				49°14.95	123°44.92		390					
		0439	EN				49°14.92	123°44.97							
4	DK01		BE	NET		158									Borg
		1453	BO				49°14.96	123°44.99	401	390			CS		
		1502	EN				49°14.92	123°45.00							
4	DK01		BE	MPS		159									
			BO												
			EN												

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