

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2010-01

DATE:

From: 2 FEBRUARY to: 16 FEBRUARY 2010

VESSEL:

JOHN D TULLY

PROJECT(S):

LINE P

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

WaterProperties.ca

Captain: Bryen Pennel First Officer: Don

Second Officer: Shane Lovelace Third Officer: _____

Fishing Master: _____

Mission Participants / Agencies: DFO UBC UVR CW

Scientific Personnel:			
Name	Chief Scientist:	Watch	Cabin
WENDY RICHARDSON	MARIE	NUTB	B
SCOTT ROSE	ROBERT	00-12	C
DOUG MOORE		06-18	D
ALEXANDRA LARA-ESPINOZA		06-12	E
CHRISTINA SCHALENBURG		12-18	E
NINA NEMCEK		12-24	F
CONSTANCE COURAGE		00-06	F
NICOLE SUKEDU		18-24	G
KENDRA MITCHELL		00-06	G
GLENN COOPER		18-24	H

Second leg of Mission: Chief Scientist;

[illegible]

Data logging computer: PAC02511

Data acquisition program: SEASAVE V7
 CTD deck unit make: SBE model: 11+ serial number: 0424

Primary CTD

Make: SBE model: 9 serial number: 0443

Primary temperature serial number: 4752

Primary conductivity serial number: 2173

Secondary temperature serial number: 2968

Secondary conductivity serial number: 2399

Transmissometer: Wet Labs Model: C-Star s/n: 1005DR

Fluorometer: Model Seapoint Cable gain: 10X s/n: 2229 P S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 1438 P S or NO pump?

PAR sensor: Biospherical Model: QS2300 s/n: 4656

Other sensors: pH s/n: 0692 P S or NO pump?

Other sensors: s/n: P S or NO pump?

Other sensors: s/n: P S or NO pump?

Other sensors: s/n: P S or NO pump?

Secondary CTD

Make: _____ 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 _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres):

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of 11

Month <u>FEBRUER</u>				Year <u>2010</u>			Ship <u>TULLY</u>				Cruise ID <u>2010-01</u>				
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							
Feb 3	S103	0538		ROS		1	48° 35.596	123° 30.031	217	217	1-11	11			bottle #1 triggered in air, no water for sampling
		0543					48° 35.605	123° 30.032							
		0601					48° 35.623	123° 30.084	7						
3	JF01	1225		USW			48° 16.	123° 31.					SR		Missed Lat+Long, sorry
3	JF02	1445		USW			48° 17. 988	124° 0.027					SR DM		
3	JF03	1651		USW			48° 27.04	124° 29.80	.				D.M.		
3	JF04	1847		UWS			48° 32.34	125° 00.12	65				W.N.N		
3	P1	2051	BE	ROS		2	48° 34.438	125° 30.031	136	130	12	1	NN/MR	✓	PAR/pH ON
		2055	BO				48° 34.481	125° 30.016							- spike in sensors -
		2100	EN				48° 34.531	125° 30.040							on down cast
3	P2	2323	BE	ROS	US	3	48° 35.97	126° 00.08	118		13-23	11	N ² /MR/DM	✓	
		2326	BO				48° 35.99	126° 00.09		100					
		2339	EN				48° 36.06	126° 0.085							
3	P2	2350	BE	NET		4	48° 36.06	126° 00.092	118				N ² /DM		
		2354	BO				48° 36.117	126° 00.032		112					
		2357	EN				48° 36.16	126° 00.03							
4	P2	0023	BE	ROS	US	5	48° 36.08	126° 00.05	118				N ² /MR	X	
		0026	BO				48° 36.08	126° 00.06		108	24-31	8			
		0035	EN				48° 36.17	126° 00.06							

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

Notes:

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

WaterProperties.ca
 Version: 06 March 2008

This page is for any notes or observations

Event 2 P1 - cap left on pH sensor ✓

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 2 of 11

Month <u>FEBRUARY (FEBRUARY)</u>		Year <u>2010</u>		Ship <u>TULLY</u>		Cruise ID <u>2010-01</u>									
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							
4	P3	02:07	BE	ROS	US	6	48° 37.52	126° 20.15	817		32	1	N2/MR	✓	PAR + pH ON - huge spikes, salinity on downcast
		0227	BO				48° 37.59	126° 20.08		757					
		0244	EN				48° 37.61	126° 20.13							
4	P4	0420	BE	ROS	US	7	48° 39.02	126° 40.29	1328		33-46	14	N2/MR	✓	PAR + pH ON - huge spikes, same problem
		0424	BO				48° 39.06	126° 40.28		200					
		0443	EN				48° 39.07	126° 40.20							
4	P4	0643	BE	NET		8	48° 38.88	126° 39.52					DM/N2		- wind picking up
		0656	BO				48° 39.46	126° 40.11							
		0701	EN				48° 39.25	126° 40.05							
4	P4	0717	BE	NET		9	48° 39.00	126° 40.00					DM/N2/CS		- DNA
		0724	BO				48° 39.00	126° 40.00							
		0737	EN				48° 39.09	126° 40.16							
4	P4	1152	BE	ROS		10	48° 39.03	126° 39.98	1328	1250	47-64	18	SR	✓	PAR OFF SPIKES. w/ new termination
		1213	BO				48° 39.00	126° 40.01							
		1257	EN				48° 39.04	126° 39.99							
4	P4	1451	BE	ROS		11	48° 39.02	126° 40.00	1328		65-88	24	MR	✓	pH OFF no pH = no spikes?
		1457	BO				48° 39.04	126° 39.98		1320					
		1529	EN				48° 39.04	126° 39.99							

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

Notes:

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

WaterProperties.ca
Version: 06 March 2008

Cast 0006 @ P3: Just about no data, all spikes.

EVENT #8: NET TO 260m. - HI WIRE $\angle$ THROUGHOUT - UP TO 40° / BONGO SAT AT BOTTOM WHILE SHIP (5-10 MIN)
MANOEURED TO CORRECT WIRE ANGLE / $\angle = 20-30^\circ$ ON UPCAIST. = HI FM. COUNT.

EVENT #9: NET TO 260m. - HI WIRE ANGLE AT BEGINNING, THEN LOWER $\angle$ / BONGO SAT AT BOTTOM (5-10m.)
BECAUSE OF MISCOMMUNICATION WITH WINCH OPERATOR DUE TO RADIO. = HI FM. COUNT.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY (FEVRIER)				Year 2010			Ship Tully				Cruise ID 2010-01					
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								
4	P4	1639	BE	ROS	US	12	48°38.98	126°40.120	1328	1000	89-104	16	SR/DM	✓	computer crash	
		1655	BO				48°38.97	126°40.08								
		1712	EN				48°38.99	126°40.02								
4	P5	1925	BE	ROS	US	13	48°41.59	127°10.12	2100	2005	105	1	SR/NN	✓	-22 bottles @ 2005m	
		2012	BO				48°41.65	127°10.03		(2025db)					-2 @ 5m	
		2044	EN				48°41.67	127°10.04							-slow descent, lots of	
4	P6	23:11	BE	ROS	US	14	48°44.70	127°40.09	2540	2005	106	1	N ² /DM	✓	-noticed header was	
		23:49	BO				48°45.00	127°39.58							2010-03, check previous	
		00:24	EN				48°45.27	127°39.12							-23 bottles @ 2005m	
6	P12	00:23	BE	ROS	US	15	48°58.37	130°40.21	3225	600	130-151	22	N ² /DM	✓	-still big swell	
		00:35	BO				48°58.39	130°40.15							PAR ON	
		0100	EN				48°58.42	130°39.91							-wrong depth in header	
6	P12	0135	BE	NET		16	48°58.32	130°39.73	3227	250			N ² /DM		-bioluminescent	
		0147	BO				48°58.40	130°39.73							bongos!	
		0151	EN				48°58.38	130°39.68								
6	P12	0226	BE	ROS	US	17	48°58.18	130°39.90	3225	3210	107-129	23	N ² /PT/CS	✓	PAR OFF	
			BO												-cast aborted ~400m	
			EN												-computer crash	
															-problem with	
															termination housing	

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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							
6	P12	03:36	BE	BOT		18	48° 58.20	130° 40.00	3225	50			N ² /GC/CS		-Go flos Christina 2 bottles 50 & 10m
			BO												
		04:01	EN												-aborted messengers depth
6	P12		BE	ROS	US	19			3225	3210	107-129	23	N ² /GC	✓	-reconnected CTD to LARS after new
			BO				ABORT	-CTD cable snapped							termination whipping
			EN												
6	P13	0950	BE	ROS		20	49° 2.55	131 39.91	3328			1		✓	-new termination
		1025	BO				49 2.54	131 40.02			200		SR		-23 bottles @ 2005, contaminated barrel w/ surface water ~2L
		1107	EN				49 2.55	131 40.21							
6	P14	1547	BE	ROS		21	49° 7.38	132° 40.03	3313			1	SR	✓	Stopped @ 965 d/b to trouble operators
		1622	BO				49° 7.32	132° 40.02			201				-no barrel filled
		1659	EN				49° 7.38	132° 39.99							
6	P15	2239	BE	ROS	US	22	49° 11.87	133° 40.01	3394	2005	202	1	N ² /DM	✓	Changed Oxy + trans cable for P15 34.5m
		2315	BO				49° 11.73	133° 40.07							-23 bottles @ 2005 barrel
		2356	EN				49° 11.80	133° 40.39							
7	P16	0502	BE	ROS	US	23	49° 16.94	134° 39.97	3618	200	203-219	17	N ² /GC	✓	-changed pH and trans cable
		0506	BO				49° 16.94	134° 40.01							
		0523	EN				49° 17.03	134° 39.68							PAR / pH ON

→ cable snapped reterminated in time for P13 ≈ 12 m cut off

→ spike in trans @ 100m on upcast



DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Feb				Year 2010			Ship Tully				Cruise ID 2010-01				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Pressure Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
7	P16	05:36	BE	NET		24	49°17.0176	134°39.8919	3618	250			W2/GC		-30° angle, lots of fishing trying to get it in the water
		05:49	BO				49°17.033	134°39.6631							
		05:00	EN				49°17.652	134°39.7150							
7	P16	06:39	BE	ROS	US	25	49°17.10	134°39.73	3618	3600	220-243	24	N2	✓	PAR, pH OFF
		07:46	BO				49°16.92	134°38.71							- corrosion on PAR plate
		09:21	EN				49°16.86	134°38.31							- altimeter hadn't
7	P16	10:15	BE	GO-FLO		26	49°17.050	134°39.713	3618	50			SR		U. Vic cast
		10:50	BE	GO-FLO		27	49°17.050	134°39.713	3618	100			SR		
		11:26	BE	GO-FLO		28	49°17.065	134°39.965	3618	200			SR		
7	P16	12:07	BE	ROS		29	49°17.05	134°39.70	3618		244-267	24	SR		Stopped @ 934 db
		12:43	BO				49°16.99	134°39.77		2000					to switch operators
		13:22	EN				49°16.98	134°39.91							
7	P16	14:23	BE	ROS		30	49°17.04	134°39.95	3618	1000	268-283	16	SR		
		14:43	BO				49°17.00	134°40.07							
		15:06	EN				49°16.93	134°40.24							
7	P17	19:52	BE	ROS		31	49°21.00	135°40.13	3418	2005	284	1	N2/DM	✓	-22 bottles @ 2005m
		20:29	BO				49°21.01	135°40.31							for barrel 1 @ 1000m
		21:04	EN				49°21.06	135°40.27							-sped up descent @ 1590

This page is for any notes or observations

→ Kicked in by 3600, was worried it wasn't working, maybe drifted far but depth had been 3618 entire time or station

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY		Year 2010					Ship TULLY			Cruise ID 2010-01					
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							
8	P18	0207	BE	ROS	US	32	49°26.04	136°39.99	3812	2005	285-308	24	N2/DM	✓	- Calibration cast
		0243	BO				49°26.34	136°39.64							pause @ 122m operator testing LARS
		0319	EN				49°26.32	136°39.02							- N17 drummy spigot
8	P19	0806	BE	ROS	US	33	49°29.96	137°39.97	3904		309	1	SR	✓	23 NICKINS closed
		0842	BO				49°30.06	137°39.97		2005					@ 2005, 1 @ 5.
		0920	EN				49°29.95	137°40.10							Serviced baby bots
8	P20	1400	BE	ROS	US	34	49°33.99	138°39.95	4025		310-333	24	SR	✓	
		1519	BO				49°34.11	138°40.11		4015					IOS Deep Cast
		1651	EN				49°33.99	138°39.95							
	~ P20	1322	BE	ARG		33B	49°33.568	138°35.088							Deploy ^{IOS} Argo 4831
8	P20	1739	BO	NET		35	49°34.00	138°40.00	4025	255			SR		15° wire angle
		1804	BO	NET		36	49°33.97	138°40.00	4025	250			SR		
8	P20	1906	BE	ROS		37	49°33.97	138°39.94							PAG + pH ON. DMS CAST.
		1910	BO				49°33.98	138°39.93			334-352	19			TABLE DRIVEN.
		1929	EN				49°33.99	138°40.07							add NMEA string
8	P20	1939	BE	NET		38	49°33.96	138°39.96	4025	1000			N2		- 0° wire angle.
		2002	BO				49°33.97	138°39.96							
		2025	EN				49°33.99	138°39.98							

This page is for any notes or observations

Also swapped out DO sensor as signal was "fuzzy" at depth. Also swapped out Altimeter

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 7 of 11

Month <u>FEBRUARY</u>		Year <u>2010</u>		Ship <u>TULLY</u>		Cruise ID <u>2010-01</u>									
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							
8	P20	2210	BE	ROS	US	39	49°34.03	138°39.95	3940	4000	353	1	N2/DM	✓	table driven firing
		2320	BO				49°34.01	138°39.91							PAR, pH off
			EN				- computer crash		242	6db up cast					altimeter @ 30 ^{depth} 3127
8	P20	2356	BE	ROS	US	40	49°33.88	138°39.98	3940	2426	354-373	20	N2	✓	resume bottle firing
		0054	EN				49°33.98	138°40.04							on this cast after
9	P20	0312	BE	ROS	US	41	49°34.06	138°40.06	3940	20	374-381	8	N2	✓	- spike @ 10m
		0313	BO				49°34.06	138°40.07							- tripped N9 since
		0319	EN				49°33.99	138°40.03							8 breached surface
9	P20	0412	BE	ROS	US	42	49°34.02	138°40.06	3940	2080	382-405	24	N2	✓	- Scott checked dunnage
		0449	BO				49°34.00	138°40.11							plugs, move spikes
		0524	EN				49°34.10	138°39.80							error flashing in data
9	P20	0630	BE	ROS	US	43	49°34.04	138°40.16	3940	1000	406-429	24	N2/GC	✓	- resorted sea
		0650	BO				49°34.05	138°39.85							Cable → awful spike
		0711	EN				49°34.17	138°39.62							- operator paused 44m
9	P18-P19	1645				44	49°26.09	137°19.91							
10	LOOP1	0307	BE	UWS		✓	49°19.44	135°17.96	2342						Loop for HPLC, etc.
10	LOOP2	0703	BE	UWS			49°15.29	134°25.68	1655				SR		HPLC, etc, neds
10	LOOP3	1110	BE	UWS			49°10.46	133°20.98	2091				SR		
10	LOOP4	1554	BE	UWS			49°05.35	132°13.41	2329				SR		

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

Notes:

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

WaterProperties.ca
 Version: 06 March 2008

→ altimeter very spiky on upcast

→ transmit light flashing, spikes are vertical/horizontal rather than previous diagonal

EVENT 43 B: Deploy OSU Iridium Float 4378 @ 0916, 9 Feb, 49°33.650, 138°57.047

→ Deploy Met Buoy

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 8 of 11

Month			Year			Ship			Cruise ID						
FEBRUARY			2010			TULLY			2010-01						
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							
10	LOOPS	2020	BE	UWS			49°00.22	131°07.73	2475						
10	P12	2220	BE	BOT	MSG	45	48°58.10	130°39.77	3225	50		2	GC/CS		- Go flos
		2247	EN												
10	P12	2303	BE	ROS		46	48°58.02	130°39.43	3225	790		✓			- CTD sensor test
		2316	BO				48°58.01	130°39.22							Clean test
		2337	EN				48°58.04	130°39.18							PAR/pH dumme
10	P12	2345	BE	BOT	MSG	47	48°57.95	130°39.87	3225	200		2	GC/CS/N ²		- Go flos
		0007	BO				48°57.94	130°39.87							- top bottle didn't
		0007	MR				48°57.94	130°39.87							close, reset to
		0032	EN				48°58.22	130°38.65							100m
11	P12	0052	BE	ROS	VS	48	48°58.14	130°40.08	3232	3260	107-130	24	N ²	✓	IOS deep cast
		0149	BO				48°58.10	130°40.00							
			EN												
11	P12	0308	BE	BOT		49	48°58.388	130°39.924	3232	300		1	DM/CS		- Go flos
		0334	BO				39	94							
			MR												
		0353	EN				48°58.50	130°39.53							

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

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

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of 11

Month <u>FEBRUARY</u>		Year <u>2010</u>		Ship <u>TULLY</u>		Cruise ID <u>2010-01</u>									
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							
11	P12	0433	BE	ROS	VS	50	48° 58.32	130° 39.96	3232	2000	152-175	24	N ² /GL	✓	
		0509	BO				48° 58.49	130° 39.14							
		0547	EN				48° 58.82	130° 38.25							
11	P12	0646	BE	ROS	US	51	48° 58.31	130° 39.85	3232	1000	176-199	24	N ²	✓	-NMEA really acting up 9° E?
		0705	BO				48° 58.72	130° 39.46							-spike @ 1000 m
		0728	EN				48° 58.98	130° 39.12							
11	LOOP6	0746	BE	UWS			48° 58.59	130° 37.22					N ²		HPLC, chl, nats
11	LOOP7	1238	BE	UWS			48° 53.75	129° 43.70					SR		" " "
11	P18	1252	BE	ROS	US	52	48° 53.56	129° 39.96	2658	2005	430	1	SR	✓	17, 18 + 1 had top vents open
		1331	BO				48° 53.55	129° 39.96							minor Sal spikes @
		1409	EN				48° 53.50	129° 39.89							200, 700 + 1250 m
11	P9	1657	BE			53	48° 51.41	129° 10.01	2355	2005		1	SR	✓	Paused @ 823 db for operator switch
		1737	BO				48° 51.38	129° 10.04							Comperash @ 60m
		1815	EN				48° 51.43	129° 10.00							see notes →
11	P9	1820	BE			54	48° 51.43	129° 10.02			431	1		couldn't	-chl not filtered immediately left →
		1821	BO				48° 51.43	129° 10.02							-original loop 8
		1822	EN				48° 51.43	129° 10.02							samples no position →
11	LOOP8	2042	BE	UWS			48° 49.58	128° 45.59					DM		

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

Notes:

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

WaterProperties.ca
 Version: 06 March 2008

→ pause @ 30m ↑ to straighten wire, onboard

Computer crash at the end of Event #53. Started Event 54 to get 5m bottle.

Sitting in the lab in the light

recorded (chh, HPLC) ~ 0800 local

- this "loop 8" problem with HPLC sample,
filter, as new, cross threaded, no vacuum.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 10 of 11

Month		Year		Ship		Cruise ID										Page		of	
FEBRUARY		2010		TULLY		2010-01										10		11	
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											
11	P8	2134	BE	ROS	US	55	48° 49.18	128° 39.94	2518	2000	432-453	22	N ² /DM	✓	-CTD unit beep @1600m				
		2209	BO				48° 49.30	128° 39.30							but no spike				
		2302	EN				48° 49.34	128° 38.75							-Spike all channels 1000m				
11	P8	2215		ARGO		56	48° 49.32	128° 39.18	2518				MR/N ²						
12	P7	0439	BE	ROS	US	57	48° 46.59	128° 9.70	2495	380	454	1	N ²	✓	-cancelled @ 380m				
		0448	BO												too ROUGH!				
		0456	EN				48° 46.45	128° 9.65											
13	LC01	0529	BE	ROS	✓	58	48° 50.42	125° 27.79	94	82	—	0	N ²	✓					
		0531	BO				48° 50.40	125° 27.81											
		0533	EN																
13	LC02	0607	BE	ROS	✓	59	48° 48.65	125° 31.13	110	94	—	0	N ²	✓					
		0610	BO				48° 48.63	125° 31.17											
		0612	EN				48° 48.61	125° 31.20											
13	LC03	0645	BE	ROS	US	60	48° 46.91	125° 34.49	135	126	475	1	N ²						
		0648	BO				48° 46.91	125° 34.54											
		0652	EN				48° 46.89	125° 34.57											
13	LC04	0742	BE	ROS	✓	61	48° 43.50	125° 40.82	165	158	—	✓	N ²	✓	-forgot to archive				
		0746	BO				48° 43.50	125° 40.80							until 40m down				
		0749	EN				48° 43.47	125° 40.80											

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Code:

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

Notes:

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

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 11 of 11

[illegible]

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

Notes:

Time Code:

BE = Beginning Time of Cast DE = Deployment Time
BO = Bottom Time of Cast MR = Messenger Release Time
EN = End Time of Cast RE = Recover Mooring Time

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008