

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2009 - 06

DATE:

From:

8 July

to:

22 July, 2009

VESSEL:

CCGS Sir Wilfrid Laurier

PROJECT(S):

C30 Turbo 2009

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

WaterProperties.ca

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of

Month <u>July</u>				Year <u>2009</u>			Ship <u>Sir Wilfrid Laurier</u>		Cruise ID <u>2009-06</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	NP1	01:16	BE	ROS	UN	001	48° 53.291	125° 52.205	55		1-75	57	MD/KS/SV	✓	Drift bottles 1, 2 & 3
		01:17	BO				48° 53.292	125° 52.188		50					
		01:25	EN				48° 53.291	125° 52.192							
	NP1	0130	BE	NET					55	44			JN/AS		
		0147	EN												
		2104	BE	XCTD			50° 22.20	131° 1.19		1100			SV/MD		XCTD 001
11	NP3A	14:04	BE	ROS	US	002	49° 51.696	129° 14.164	368		6-20	15	KS/MD/SV	✓	Drift bottles 4, 5 & 6
		14:35	BO				49° 51.658	129° 14.140		350					
		15:03	EN				49° 51.605	129° 14.182							
		15:07	BE	NET			49 51.605	129 14.182							
		15:15	EN	NET			49 51.605	129 14.182	368	100			JN/AS		
12		0304	BE	XCTD			50° 418.02	133 53.060		1100			SV/MD		XCTD 002
12	NP5	14:06	BE	ROS	US	003	51° 35.376	136° 26.398	3638						
		14:33	BO				51° 35.363	136° 26.363		1000	21-37	17	KS/MD/SV	✓	Drift bottles 7, 8 & 9
		15:15	EN				51° 35.376	136° 26.382							
		14:03	BE	NET			51 35.376	136 26.398		100					
		14:15	EN	NET			51 35.376	136 26.382							
12		0858	BE	XCTD			51 14.20	134		1100			MD/MS		XCTD 003

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:

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

001

0052 - TSG Fluoresaturated on 30x gain so swapped out TSG ECTD cables and replaced with 10x. Chla level dropped a couple minutes later but 10x cables left in place.

Winch counter out 3m at 50m - check setup
thumbwheel window B reads 0011 For cast - pumps not on
Salinity 32 PSU. - check setup.

*Bottles tripped on the fly
For this cast only

002

miscast - not archiving - so repeated. same filename.

Winch counter zeroed at surface but reading 5 at 9m CTD depth.

almost the same at 350m.

Altimeter did not see bottom V_2 4.9 V
overshot 150 on upcast so cycled back down from 125

Salinity inserts 11, 12, 13 not rinsed.

003

Winch counter working better after fairlead sheave adjusted - cast done on manual

Front Features in TSG & DO ~60m.

ISUS noisy on up & down cast and shows lots of hysteresis on upcast (poor flow?)
+/- 0.05 V plus a possible low frequency oscillation.

XCTD 003 - appeared to start on deck and reading in water at "379.3m"?

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 2 of

Month <u>July</u>				Year <u>2009</u>			Ship <u>Sir Wilfrid Laurier</u>			Cruise ID <u>2009-06</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							
12	XCTA004	0905	BE	XCTA						1100			MD/MS		
	XCTA005	2107	BE	XCTA			51°57.38	138°24.84		1100			SV/MD		
13	XCTA007	0301	BE				52°16.83	140°25.15		1100			SV/MS		
	XCTA008	0902	BE				52°36.46	142°29.13		1100			MD/MS		
13	NP-7A	1404	BE	ROS	US	004	52°50.753	144°10.776	3969	1000	38-54	22	VS/MD	✓	drift bottles 10, 11 & 12
		1423	BO				52°50.767	144°10.757							
		1459	EN				52°50.766	144°10.765							
		1405	BE	NET			52°50.753	144°10.757		100			JN/MS		
	XCTA009	2100	BE	XCTA			53°03.38	146°17.40'		1100			SV/MD		
14	XCTA010	0330	BE	XCTA			53°16.08	148°27.44'		1100			SV/MD		drift bottles 13, 14 & 15
	XCTA011	0901	BE	XCTA			53°28.12	150°38.80	~4500	1100			MD/MS		drift bottles 16, 17 & 18

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

XCTD 004 - appeared to start in air - SW record starts at 179.3 m. ?

There is no XCTD 006 - number in sequence skipped.

XCTD 008 - water record starts at 46m ???

004

ISUS noise $\sim +0.0375$ V
After cast $V_{BATT} = 13.25$

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 3 of

Month <u>July</u>				Year <u>2009</u>			Ship <u>Sir Wilfrid Laurier</u>		Cruise ID <u>2009-06</u>				Trans. Cleaned	Comments
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		
							Latitude	Longitude						
14	NA-10	1407	BE	ROS	US	005	53°32.407'	152°24.954'	4518	1000	55-71	17	SV/MA/RS ✓	
		1423	BO				53°32.422'	152°24.956'						
		1436	EN				53°32.420'	152°24.930'						
		1405	BE	NET			53°32.807'	152°24.954'		100				
		1420	EN											
14	XCTD13	2100	BE	XCTD			53°38.26	154°36.54		1100		5	SV/MA	Drift bottles 22, 23 & 24
15	XCTD14	0257	BE	XCTD			53°43.88'	156°47.32'		1100			SV/MA	Drift bottles 25, 26 & 27
15	XCTD16	0858	BE	XCTD			53°42.45	159°03.30		1100			MD/MS	Drift bottles 28, 29 & 30
15	NP-12A	1407	BE	ROS	US	006	53°40.907'	160°52.253'	4243	1000	72-91	20	SV/MA/RS ✓	Drift bottles 31, 32 & 33
		1424	BO				53°40.820'	160°52.273'						
		1506	EN				53°40.597'	160°52.230'					JN/AS	
		1402	BE	NET			53°40.907'	160°52.253'						
		1417	EN				53°40.826'	160°52.273'	4243	100				

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

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

WaterProperties.ca
 Version: 06 March 2008

ISUS cleaned and turned on 15min before cast

started XCT015 - probe started on deck and s/w latched up
shipped 15 and named XCT016.

(006) extra niskins fired. #15 - dup 35m #18 dup 15m #21 & #22 5m
- all for HPLC

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 4 of

Month <u>July</u>				Year <u>2009</u>			Ship <u>Sir Wilfrid Laurier</u>			Cruise ID <u>2009-06</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							
15	UN-8	22:32	BE	ROS	US	007	53°38.850	163°26.043	1947	1000	92-108	17	KS/SV/m	✓	Drift bottles 34, 35, 36
		22:53	BO				53°38.832	163°36.178							
		23:29	EN				53°38.815	163°36.346							
		22:30	BE	NET			53°38.850	163°36.043	1947	100					net content tossed scraped hull
		22:45	EN												
		22:46	BE	NET			53°38.832	163°36.178	1947	100			JN/As		good net
		22:59	SN												
16	UN-7	00:34	BE	ROS	US	008	53°44.036	163°55.818	1335	1000	109-125	17	KS/SV	✓	Drift Bottles 37, 38, 39
		00:55	BO				53°43.921	163°55.826							
		01:31	EN				53°43.973	163°55.898							
16	UN-6	02:27	BE	ROS	US	009	53°51.006	164°3.696	77	70	126-132	7	KS/SV	✓	Drift S-H 6 40, 41, 42
		02:29	BO				53°51.006	164°3.689							
		02:42	EN				53°50.996	164°3.690							
16	UN-5	03:25	BE	ROS	US	010	53°55.548	164°11.674	82	76	133-139	7	KS/SV	✓	Drift S-H 6 43, 44, 45
		03:30	BO				53°55.554	164°11.671							
		03:46	EN				53°55.553	164°11.651							

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 5 of

Month				Year			Ship				Cruise ID					Page		of	
July				2009			SWL				2009-06					5		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											
16	UN-4	0427	BE	ROS	US	011	53°59.978	164°19.825	107	101	140-147	8	SV/MD/KS	-	Drift 8.46				
		0430	BO				53°59.990	164°19.836							46, 47, 48				
		0439	EN				53°59.018	164°19.782											
16	UN3	0526	BE	ROS	US	012	54°02.484	164°27.890	101	95	148-154	7	SV/MD/KS	-					
		0528	BO	ROS	US		54°02.495	164°27.884											
		0537	EN				54°02.519	164°27.676											
16	UN2	0643	BE	ROS	US	013	54°06.856	164°35.713	88		155-168	14	SV/MD/KS	-	1 empty bottle tripped at each depth for AKASH				
		0644	BO				54°06.868	164°35.711											
		0654	EN				54°06.895	164°35.708											
		0640	BE				54°06.856	164°35.713											
		0655	EN	NET			54°06.895	164°35.708					IN/KS						
16	UN1	0749	BE	ROS	US	014	54°11.287	164°43.660	69		169-174	5	SV/MD/KS	-					
		0752	BO				54°11.302	164°43.643											
		0800	EN				54°11.341	164°43.600											

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

012 power turned off before acquisition stopped - error file TOK

014 changed Setpoint gain cable to 3X for this cast 2009-06-0013.CON
-triggered bottom switch alarm 1m off bottom - ~~by~~ ??
ISV3 V after cast = 12.72V

Ocean Sciences Division, Institute of Ocean Sciences

Page 6 of

DAILY SCIENCE LOG

Month <u>July</u>		Year <u>2009</u>		Ship <u>Sir Wilfrid Laurier</u>		Cruise ID <u>2009-06</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							
16	BCL2	21:34	BE	ROS	US	015	58° 0.013	169° 14.324	~2500	1000	175-194	20	KS/MD/SV	✓	No sounder information available Drift bottles 49, 50 & 51
		21:59	BO				58° 0.042	169° 14.278							
		22:37	EN				55° 0.073	169° 14.298							
		2134	BE	NET			55 0.013	169 14.324		100			JN/AS		
		2149	EN												
17	BSDEEP	0800	BE	ROS	US	016	56 01.416	171° 44.744	~2470	1000	195-211	17	MD		Drift bottles 52, 53, 54 55, 56, 57
		0815	BO				56 01.470	171° 44.908'							
		0853	EN				56° 01.529'	171° 45.119'							
		0805	BE	NET			56 01.416	171 44 744	✓	110			JN/AS		
		0820													
18	BCL4	01:43	BE	ROS	US	017	59° 19.195	173° 29.926	109	100	212-221	10	KS/MD	✓	Drift Bottles: 58, 59, 60
		01:49	BO				59° 19.198	173° 29.870							
		02:01	EN				59° 19.241	173° 29.844							
		0140	BE	NET			59° 19.195	173 29.926	109	94					
		0155	EN												

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

WaterProperties.ca
Version: 06 March 2008

0015

ISUS Bath $V = 12.40(?)$ after cast

— probably bad contact with probes,

This page is for any notes or observations

0016

1-3 m swells

1-3 m of heave on rosette.

wind 25-30 kts.

0017

ISUS Bath $V = 12.65$ before cast

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 7 of

DAILY SCIENCE LOG															Ocean Sciences Division, Institute of Ocean Sciences														
Month JULY				Year 2009				Ship Sir Wilfrid Laurier				Cruise ID 2009-06																	
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																					
18	BCL-5	0913	BE	ROS	US	18	60° 38.832	174° 09.056	91	83	222-231	10	SV/MD/KJ	✓	Drift bottles 61, 62														
		0914	BO				60.38.831	174 09.049																					
		0925	EN				60 38.855	174° 09.097																					
	BCL5	0945	BE	NET			6038.832	174 09.056					JN/AS																
		1000	EN																										
18	SLIP-5	19:41	BE	ROS	US	19	62° 33.791	173° 33.300	67	60	232-240	9	KS/MD/SV	✓	Drift Bottles: 64, 65, 66														
		19:46	BO				62° 33.797	173° 33.305																					
		19:58	EN				62° 33.808	173° 33.313																					
		1945	BE	NET			62 33.791	173 33.300		61			JN/SV																
		2000	EN																										
19	BCL6a	0534	BE	ROS	US	20	63° 54.356	172° 13.284	50	50	241-248	8	ND	✓															
		0535	BO				63° 54.354	172° 13.262																					
		0542	EN				63° 54.355	172° 13.240																					
	BCL6a	0505	BE	NET			63 54.356	172 13.284					JN/SV																
		0520	EN																										

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

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

018

bottles

Nina & Keith

Jelly fish tentacles on frame.

This page is for any notes or observations

020

ISUS

12.36V

after cast

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

4-15-01

Month <u>July</u> Year <u>2009</u>				Ship <u>Sir Wilfrid Laurier</u>		Cruise ID								Page <u>8</u> of <u> </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							
19	BRS-1	2028	BE	ROS	US	21	65° 39.140	168° 13.092	42	36	249-253	5	KS/MD	✓	Strong current
		20:30	BO				65° 39.186	168° 13.122							
		20:38	EN				65° 39.382	168° 13.253							
19	BRS-2		BE	NET			65° 39' +	168° 13	42			-	SN/AS		
19	BRS-2	2115	BE	ROS	US	22	65 40.157	168 23.870	48		254-261		MD/KS		
		2117	BO				65 40.193	168 23.882							
		2122	EN				65 40.294	168 23.878							
19	BRS-2	2115	BE	NET			65 40.157	168 23.870	48	40		-	SN/AS		5-10° wire angle
		2125													
19	BRS-3	2159	BE	ROS	US	23	65 40.831	168 33 87			262-266	5	MD/KS		
		2201	BO				65 40 841	168 33.866	51	46					
		2206	EN				65° 40.903	168 33.856							

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

Notes:

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 05 March 2009

This page is for any notes or observations

(22) shipper sounder used
instead of Simrad (Captain's orders) until further notice.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of

Month <u>JULY</u>			Year <u>2009</u>			Ship <u>Sic Wilfred Laurier</u>			Cruise ID <u>2009-06</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							
<u>19</u>	<u>BRS-B</u>		<u>BE</u>	<u>NET</u>											
<u>19</u>	<u>BRS-4</u>	<u>2239</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>24</u>	<u>65 41.754</u>	<u>168 42.792</u>	<u>47</u>		<u>267-270</u>	<u>4</u>	<u>md/ks</u>	<u>✓</u>	
		<u>2241</u>	<u>BO</u>				<u>65 41.5</u>	<u>168 42.5</u>							
		<u>2245</u>	<u>EN</u>				<u>65 41.999</u>	<u>168 42.745</u>							
<u>19</u>	<u>BRS-5</u>	<u>2328</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>25</u>	<u>65 42.916</u>	<u>168 53.707</u>	<u>46</u>		<u>271-278</u>	<u>8</u>	<u>md/ks</u>	<u>✓</u>	
		<u>2330</u>	<u>BO</u>				<u>65 42.934</u>	<u>168 53.633</u>							
		<u>2335</u>	<u>EN</u>				<u>65 42.946</u>	<u>168 53.582</u>							
<u>19</u>	<u>BRS-5</u>	<u>2315</u>	<u>BE</u>	<u>NET</u>	<u>US</u>		<u>65 42.916</u>	<u>168 53.707</u>	<u>45</u>	<u>40</u>			<u>JN</u>		
		<u>2330</u>	<u>EN</u>												
<u>20</u>	<u>UTNS</u>	<u>12:46</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>26</u>	<u>67° 40.240</u>	<u>168° 57.439</u>	<u>50</u>	<u>45</u>	<u>279-286</u>	<u>8</u>	<u>R>md</u>	<u>✓</u>	<u>Drift bottles 7980, 81</u>
		<u>12:51</u>	<u>BO</u>				<u>67° 40.235</u>	<u>168° 57.427</u>							
		<u>12:57</u>	<u>EN</u>				<u>67° 40.236</u>	<u>168° 57.427</u>							
		<u>12:35</u>		<u>NET</u>			<u>67° 40.240</u>	<u>168° 57.439</u>	<u>51</u>	<u>46</u>			<u>AS/SV</u>		
		<u>12:45</u>													

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

(25) ISUS Battery changed after cast
used UBC 'used' batteries (individual $V = 1.5 - 1.51$)
pack voltage 13.53V

(26) Vent on Niskin bottle 1 was open when rosette brought on board - samples not taken

Page 10 of

Cast Type:	USW = Sea Water Loop	Bottle Firing Method:	Time Code:	Transmissometer to be cleaned before each cast, do not use Ammonia products
BOT = Bottle cast, no CTD	MOR = Mooring	US = Up / Stop	BE = Beginning Time of Cast	DE = Deployment Time
CTD = CTD without Rosette	NET = Plankton Net Haul	UN = Up / No stop	BO = Bottom Time of Cast	MR = Messenger Release Time
ROS = Rosette plus CTD	DRF = Drifter	DN = Down / No stop	EN = End Time of Cast	RE = Recover Mooring Time
SET = Fish Set	=	Notes:		<i>Produced by the Water Properties Group, IOS</i>
				WaterProperties.ca Version: 06 March 2008