

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2014-19

DATE:

From: Aug 19/14 to: 2⁽⁴⁾ SEPTEMBER 2014

VESSEL:

J. P. Tully

PROJECT(S):

LINE P

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

WaterProperties.ca

Captain: VICTOR GRONMYR
 Second Officer: JUDI HEBIK
 Fishing Master: RYAN BRADWOOD
CH. ENG

FIM GARRETT
KEVEN NAPHTALI

Mission Participants / Agencies: DFO / FCS

Chief Scientist:

MARIE ROBERT 07-19 A

Name	Watch	Cabin	Name	Watch	Cabin
MARIE BELTON	12-24	B	MARIE ROBERT	07-19	A
SCOTT ROSE	00-12	C	TERESA JARNIKOVA	12-18	H
KYLE SIMPSON	PH	D	LIZZY ASHER	06-12	H
ANDREW ROSS	TH-DIC	D	MOIRA GALBRAITH	07-19	7
KATHRYN PURDON	12-18	E	MICHAEL ARYCHUK	DMS	A
AMANDA TIMMERMAN	18-24	F			
RICK NELSON	18-24	F			
BRIAN GUEST	00-06	F			
DAVE JANSSEN	06-12	G			
ANDREAS MUELLER	00-06	G			

Chief Scientist:

Name _____

[illegible]

#3

Data acquisition program: Seasave
 CTD deck unit make: SBE model: 4310

Primary CTD

Make: SBC model: 94 serial number: 0443
Primary temperature serial number: 712

Primary temperature serial number: 245 model: 4 serial number: 0443

Primary conductivity serial number: 2106
Secondary conductivity serial number: 2280

Secondary temperature serial number: 7280
Secondary temperature serial number: 7663

Secondary conductivity serial number: 2663

Transmissometer: Wet labs
Model: 2754

Fluorometer: Model Seapoint Model: C-5
Cable gain: _____

Oxygen sensor: SBF Cable gain: Model: SBF

Oxygen sensor: SBE Model: SBE
PAR sensor: BLO Model:

Other sensors: 360 Model:

Other sensors:

Other sensors:

Other sensors:

Other sensors: _____

Other sensors: _____

Other sensors:

Secondary CTD

Make: _____ model: _____ serial number: _____
Primary temperature serial number: _____

Primary temperature serial number: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Primary conductivity serial number: _____
Secondary temperature serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Secondary conductivity serial number: _____
Transmissometer: _____
Model: _____

Fluorometer: Model: _____ s/n: _____
Cable: _____

Fluorometer: Model _____ s/n: _____
 Cable gain: _____ s/n: _____
 Oxygen sensor: _____

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

FAK sensor: _____ s/n: _____
 Model: _____
 Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____
 _____ s/n: _____

s/n: _____

vibration bottle location (height above CTD in metres):

_____ (height above CID in metres): _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of 18

Month <u>AUGUST</u>				Year <u>2014</u>			Ship <u>TULLY</u>			Cruise ID <u>2014-19</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							
20	SI 1		BE	ROS		1	48 39.41	123° 30.13					SR	✓	
			BO												
			EN				ABORT								
20	SI 1	1404	BE			2	48 39.44	123° 30.21					SR	✓	
			BO												
			EN				ABORT								
20	Haro 59	1658	BE			3	48° 36.78	123° 14.83	235		1-15	15	SR	✓	
		1703	BO				36.75	14.82		225					
		1732	EN				36.92	14.73							
20	PLASTIC 4	2019	BE			4	48 24.069	123. 14.85	64	4.5			MG		AVE 19.56C/10
		2029	EN				23.49	16.21	104						
20	CTD test 3	1954	BE	ROS		5	48 22.57	123° 17.73	117				SR	X	using Fish 443 to test 500
		1958	BO				48 22.59	123. 17.72							
			EN				48 22.59	123° 17.12							
20	JF1	2144	BE	Loop	—	6	48 15 955	123 30 05	158	—	Loop JF1	—	MB	—	
20	JF2	2352	BE	ROS	US	7	48 17 97	124 0. 00	187		Ro-28	13	MB	✓	Labels provided on 2014-19
		2357	BO				48 17 98	124 0 01		175					
21		0011	EN				48 17 96	124 0 11							
21	JF3	0230	BE	Loop	—	8	48 27 01	124 30 14	225	—	Loop JF3	—	MB	—	

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

CTD # 0506 was setting off an alarm @ ≈ 50 m of depth. CTD 443 was put in the rosette and it is now the primary CTD for this mission. The Seapoint Fluorometer was moved over for JF2, 3642 was the Seapoint's S/N.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 2 of 18

Month <u>AUGUST</u>				Year <u>2014</u>			Ship <u>TUGAN</u>				Cruise ID <u>2014-19</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							
21	JF4	0435	BE	Loop	-	9	48 32.30	125 0 00	66	-	Loop JF4	-	MR	-	
21	P1	0653	BE	ROS	US	10	48 34.53	125 29.98	115		29-31	3	MR	✓	
		0655	BE				34.53	29.97							
		0702	BE				34.53	29.94							
21	P1	0653	BE	Resum Loop		11	48 34.53	125 29.98	115		Resum Loop P1		MR		
21	P2	0925	BE			12	48 35.95	126 0.05	117		32-40	9	SR	✓	
		0928	BO				35.96	0.06							
		0939	EN				35.97	0.04							
21	P2	0931	BE	P2 Cloop		13	48 35.96	126 0.06	117		C loop P2		SR		Bot 7 tripped
21	P2	1005	BE	Bongo		14	48 35 90	126 0.03	117				MR		@ 17 m by accident
		1008	BO				35 92	0.04		110					
		1010	EN				35.92	0.04							
21	P2	1015	BE	ROS		15	48 35.91	126 0.04	117		41-54	14	SR	✓	DMS Cast
		1018	BO				35.92	0.04		100					chl max @ 10m
		1034	EN				35.91	59.96							bottle mistake →
21	P3	1209	BE	ROS		16	48 37.54	126 19.92	808		55-56	2	SR	✓	
		1224	BO				37.58	19.84		800					
		1240	EN				37.55	19.85							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

Came up to surface, then back down to 30m for bot 2.

Bottle 13 was fired instead of 8 @ 15m. All labels were changed accordingly. SR

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 3 of 18

Month <u>August</u>				Year <u>2014</u>			Ship <u>Tully</u>			Cruise ID <u>2014-19</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							
21	P4	1442	BE	ROS		18	48° 38.96	126° 39.97	1326		57-80	24	SR	X	18 was called event
		1445	BO				38.95	39.94		150					17
		1455	EN				38.94	39.98							
21	P3		BE			17									Trace metal
			EN												Soak
	P4	1541	BE	TMR	UN	19	48° 38.95	126° 39.96	1322	1305	81-92	12	SR		
		1557	BO				38.95	39.96							
		1630	EN				38.95	39.96							
21	P4	1715	BE	ROS	US	20	48° 38.97	126° 40.02	1322		93-109	17	SR	✓	DMS cast
		1721	BO				38.97	40.07		300					
		1741	EN				38.98	40.09							
21	P4	1807	BE	MPS	UN	21	48 39.02	126 40.02	1321				MR		REPLACE 2 NETS
		1905	BO				48 39.07	126 39.96		1315					
		1935	EN				48 39.05	126 39.90							
21	P4	2021	BO	ROS	—	22	48 38.97	126 39.96	1325		—	1	MR	✓	
		2024	BO				48 38.99	126 39.96							
		2027	EN				48 39.00	126 39.94							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

THE OUTER WRAP HAS A SNAG AT AROUND 800M WILL LOOK AT IT ON THE NEXT CAST
NOTICED ON UPCAST

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 4 of 18

Month		Year		Ship		Cruise ID									
AUG		2014		TULLY		2014-19									
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	Rosette 23	2046	BE	Loop	/	23	48 38.31	126 39.79	1331				MG		Flow Ave 8.5
		2056	EN				38.82	39.76	1385	4.5					
21	P4	7125	BE	RomPS	-	24	48 39.03	126 39.92	1313		110-115				Dave's Pumps
		2201	BO				48 38.92	126 39.90		400m	(only 5 pumps)		MB/DJ		
			BE												
			EN												
22	P4	0116	BE	ROS	US	25	48 38.98	126 39.96	1324		116-134	19	MR	✓	PAR OFF
		0140	BO				48 38.93	126 39.93		1325					Deep Cast
		0223	EN				48 38.98	126 40.00							Pou deck before: -0.33
22	P4	0343	BE	ROS	US	26	48 38.99	126 40.06	1319		181-204	24	MB	✓	Shipped at 1200 (evening)
		0351	BO				48 38.97	126 40.08		500					CS CAST
		0404	EN				48 38.99	126 40.07							
22	P4	0420	BE	Pumps	-	27	48 38.99	126 39.91	1321		135-159	5 pumps	MR/DJ	-	DAVE'S DEEP PUMP
		05:34	BO				48 39.03	126 39.92	1315	1250					
		08:46	BE				48 39.00	126 39.93	1316						
		09:36	EN				48 38.96	126 39.84	1318						
22	P4	0950	BE	ROS	US	28	48 38.99	126 39.92	1325		141-156		SR	✓	UBC cast
		1014	BO				38.91	39.93		1317					
		1040	EN				38.85	39.94							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 5 of 18

Month <u>August</u>				Year <u>2014</u>			Ship <u>Tully</u>			Cruise ID <u>2014-19</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>22</u>	<u>P4</u>	<u>1048</u>	<u>BE</u>	<u>Bongo</u>	<u>/</u>	<u>29</u>	<u>48° 38.80</u>	<u>126° 40.09</u>	<u>1326</u>				<u>MG</u>	<u>—</u>	
		<u>1109</u>	<u>BO</u>				<u>38.82</u>	<u>40.09</u>		<u>250</u>					
		<u>1117</u>	<u>EN</u>				<u>38.83</u>	<u>40.08</u>							
<u>22</u>	<u>P4</u>	<u>1122</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>30</u>	<u>48° 38.83</u>	<u>126° 40.11</u>	<u>1329</u>		<u>157-180</u>	<u>24</u>	<u>SR</u>	<u>✓</u>	<u>Plastics cast</u>
		<u>1145</u>	<u>BO</u>				<u>38.86</u>	<u>40.07</u>		<u>1321</u>					
		<u>1232</u>	<u>EN</u>				<u>38.96</u>	<u>39.99</u>							
<u>22</u>	<u>P4</u>	<u>1308</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>31</u>	<u>48 38.94</u>	<u>126 39.93</u>	<u>1329</u>		<u>205-210</u>	<u>6</u>	<u>SR</u>	<u>✓</u>	<u>Amanda's cast</u>
		<u>1311</u>	<u>BO</u>				<u>38.95</u>	<u>39.94</u>		<u>150</u>					
		<u>1321</u>	<u>EN</u>				<u>38.95</u>	<u>39.98</u>							
<u>22</u>	<u>P5</u>	<u>1548</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>32</u>	<u>48° 41.48</u>	<u>127° 9.78</u>	<u>2088</u>		<u>211-213</u>	<u>3</u>	<u>SR</u>	<u>✓</u>	
		<u>1623</u>	<u>BO</u>				<u>41.53</u>	<u>9.76</u>							
		<u>1700</u>	<u>EN</u>				<u>41.50</u>	<u>9.77</u>							
<u>22</u>	<u>P6</u>	<u>1937</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>33</u>	<u>48° 44.00</u>	<u>127° 39.91</u>	<u>2000</u>		<u>214-215</u>	<u>2</u>	<u>MR</u>	<u>✓</u>	<u>Pr on deck 04: 1937</u>
		<u>2013</u>	<u>BO</u>				<u>48° 44.58</u>	<u>127° 40.00</u>		<u>2005</u>					<u>Oxy bad below 1400</u>
		<u>2051</u>	<u>EN</u>				<u>48 44.60</u>	<u>127° 39.96</u>							<u>Fluo and 600 →</u>
<u>22</u>	<u>P6</u>	<u>1939</u>	<u>BE</u>	<u>Loop</u>		<u>34</u>	<u>48 44.59</u>	<u>127.39 96</u>					<u>RN</u>		<u>600 CS Loop</u>
<u>22</u>	<u>P7</u>	<u>2328</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>35</u>	<u>48° 46.61</u>	<u>128° 09.72</u>	<u>2505</u>		<u>216-217</u>	<u>2</u>	<u>MR</u>	<u>✓</u>	<u>WRONG DEPTH 1000</u>
<u>75</u>		<u>0003</u>	<u>BO</u>				<u>48° 46.53</u>	<u>128 09.91</u>		<u>2005</u>					<u>FLUO CABLE AGAIN</u>
		<u>0037</u>	<u>EN</u>				<u>48° 46.58</u>	<u>128° 09.98</u>							

Transmissometer & Fluorometer are to be cleaned before each cast

Transmissometer & Fluorometer are to be cleaned before each cast

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: 7 July 2014

WRONG crane # and header 0026 0032, 2014-20

Cast 0033. Fluo. very noisy ~ 700 on way up, then ~ 550 started to follow
DO profile? Back to 0 ~ 350

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 6 of 18

Month <u>August</u>		Year <u>2014</u>		Ship <u>TULLY</u>		Cruise ID <u>2014-19</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							
23	P7	00:43	DE	DRF	-	36	48 45.56	128 10.03	2502	SRF			MR		ARGO #125
23	P8	03:27	BE	NET		37	48 49.02	128 39.86	2519						MAGNET OFF 00:40:45
		03:35	BO				48 49.02	128 39.86		250					
		03:40	EN				48 49.02	128 39.85							
23	P8	03:40	BE	NET		38	48 49.04	128 39.82	2520						
		04:24	BO				48 49.07	128 39.85		1200					
		04:46	EN				48 49.07	128 39.85							
23	P8	05:01	BE	ROS	US	39	48 48.99	128 39.99	2520		218-239	22	MB	✓	ms 1+2 @ surface
		05:31	BO				48 48.99	128 39.99		2005					started @ bottle 3
		06:25	EN				48 48.99	128 39.99							
23	P8	05:07	BE	CS loop		40	48 49.026	128 39.998					R		1002 loop CS
23	P9	09:12	BE	ROS	US	41	48 51.42	129 9.90	2342		240-241	2	SR	✓	
		09:46	BO				51.40	9.90		2005					
		10:20	EN				51.41	9.89							
23	P10	12:53	BE	ROS	US	42	48 53.64	129 39.86	2660		242-265	24	SR	✓	CHL Max @ 45m
		13:31	BO				53.62	39.89		2005					
		14:16	EN				53.62	39.88							
23	P10	12:55		CS loop		43	48 53.63	129 39.87					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

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 7 of 18

Month			Year			Ship			Cruise ID						
Aug			2014			Tully			2014-19						
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							
23	P11	1649	BE	ROS	US	44	48°55.99	130°10.00	2754		266-267	2	STR	✓	Stopped @ 1718 db
		1722	BO				56.00	9.94		2005					to correct wire
		1805	EN				56.08	9.89							angle
23	P12	20:31	BE	ROS	-	45	48°58.22	130°39.91	2779	SURFACE	-	-	MR	✓	PAC DIVERS DECK
23	P12	20:52	BE	ROS	US	46	48°58.22	130°39.91	3050		268-284	17	MR	✓	DMS GET
		20:38	BO				48°58.22	130°39.91		305					
		20:58	EN				48°58.19	130°39.98							
23	P12	20:33	BE	Loop	-	47	48°58.22	130°39.91	3229	-	-	-	MRB	-	Cs Loop
23	P12	21:11	BO	NET		48	48°58.24	130°40.12	3230	2005			MR		Deep Co.
23	P12	21:32	BE	ROS	US	49	48°58.26	130°39.94	3224		285-307	23	MR	✓	D 3221
		21:26	BO				48°58.22	130°39.91		3225					
		23:39	EN				48°58.24	130°39.91							
23	P12	2344	BE	MPS	UN	50	48°58.26	130°39.95	3228				MR	-	SNAG 786 ON MPS
24		0046	BO				48°58.20	130°40.12		2005					777 ON WINCH COUNTER
		0117	EN				48°58.19	130°39.98							
14	P12	0158	BE	ROS	UN	51	48°58.22	130°40.03	3228		308-319	12	MR/BS	-	RACE METAL ROSETTE
		0229	BO				48°58.22	130°40.06		1500					
		0250	EN				48°58.22	130°39.91							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

- FOUND A BROKEN WIRE, PIECE MISSING AND EITHER END RUSTED/BRITTLE
REMOVED 30CM EITHER SIDE AND TAPED ENDS INTO PLACE
CHECK AGAIN NEXT CAST

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 8 of 18

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							
24	P12	0308	BE	ROS	US	52	48 58.19	130 39.91	3729		320-335	16	MB	✓	ABORTS USC CAST
		0341	BO				48 58.71	130 39.91		2005					Spigot valve
		0419	EN				48 58.19	130 40.02							No observed spigot
24	P12	0430	BE	ROS	US	53	48 58.25	130 39.91	3729		320-335	16	MB	✓	Repeat above
		0503	BO				48 58.25	130 40.02		2005					ABORTS USC CAST
		0542	EN				48 58.19	130 40.00							
24	P12	0612	BE	ROS	US	54	48 58.18	130 40.04	3729		336-341	7	MB	✓	ABORTS USC
			BO				48 58	130 40		2005					Did not go deep
			EN				48 58	130 40							to 150m
24	P12	0623	BE	ROS	US	55	48 58.21	130 39.97	3729		336-341	7	MB	✓	Re-run ABORTS
		0626	BO				48 58.21	130 39.98		150					CAST
		0636	EN				48 58.02	130 39.96							
24	P13	1133	BE	ROS	US	56	49 2.62	131 39.93	3750		343-344	2	SR	✓	No CHL max
		1207	BO				2.63	39.93		2005					
		1240	EN				2.63	40.03							
24	P14	1743	BE	ROS	US	57	49 7.38	132 39.90	3310		345-346	2	SR	✓	59% CHL max
		1816	BO				49 7.40	132 39.91		2005		2			
		1853	EN				49 7.45	132 39.93							
24	P14	1745	BE	CS106P		58	49 07 38	132 39.90							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

COHO CAUGHT ON TUNA GEAR - FEMALE, HATCHERY (NO ADIPOSE) ~ 0.5M HEAD KEPT FOR EXHIBITS (CREW GORDON)
~ 0800 LOCAL STOMACH CONTENTS: 5 S. RHYNCHONERELLA KILLERII (POLARIC POLYCHAETE WORM), FRESHLY INGESTED ONE STILL MOVING
RHYNCHONERELLA FROZEN -80°C FOR ISOTOPES (IVEGENY)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of 18

Month <u>AUG</u>				Year <u>2014</u>			Ship <u>TULLY</u>				Cruise ID <u>2014-19</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							
24	P14-P15	2053	BE	ROS	-	59	49 9 45	133 3 85	3164		-		MB	✓	PAR ON DECK
24	P14-P15	2056	BE	ROS	-	60	49 9 45	133 3 86	3164		-		MB	✓	PAR CAST
		2100	BE				49 9 45	133 3 87		150					
		2102	BE				49 9 45	133 3 87							
24	P15	2252	BE	ROS	US	61	49 11 08	133 3 94	3277		347-348	2	MB	✓	PAR ON
25		0025	BO				49 11 99	133 39 99		2005					
		0130	EN				49 11 00	133 39 98							
25	P16	0538	BE	ROS	US	62	49 17 06	134 39 93	3623		349-372	24	MB	✓	P16 Cast Cast
		0542	BE				49 17 03	134 39 95		150m					
		0544	BE				49 17 03	134 39 93							
25	P16	0615	BE	ROS	UN	63	49 16 21	134 37 31	3673		373-384	2	MB	-	TRACING ALONG PAR
		0643	BE				49 16 99	134 40 03		1500m					
		0720	BE				49 17 00	134 40 12							
25	P16	0734	BE	ROS	US	64	49 16.99	134 40.03	3625		385-408	24	MB	✓	P16 Deep cast
		0834	BO				17.02	40.13		3617					
		0959	EN				16.99	40.16		3688					
25	P16	1006	BE	Bongo		65	49 16.98	134 40.11	3625				MG	-	1200m bongo
		1043	BO				16.98	40.27		1200					
		1108	EN				17.02	40.23							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 10 of 18

Month				Year			Ship			Cruise ID						
AUG				2014			TULLY			2014-19						
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								
25	P16	1133	BE	ROS	US	66	49° 17.01	134° 40.27	3621		409-415	7	SR	✓	bot 8 tripped	
		1137	BO				17.03	40.28		150					by accident	
		1148	EN				17.02	40.35							bot 9 was a redo	
25	P16	1157	BE	NET		67	49° 17.04	134° 40.39	3621				SR		of bot 6	
		1205	BO				17.04	40.41		250						
		1210	EN				17.05	40.42								
25	P16	1257	BE	ROS	US	68	49° 16.98	134° 40.24	3621		416-439	24	SR	✓	Cesium 2, 500 m	
		1305	BO				17.03	40.28		500						
		1319	EN				17.02	40.36								
25	P16	1433	BE	ROS	US	69	49° 16.98	134° 39.98	3621		440-456	17	SR	✓	DMS cast	
		1441	BO				17.03	40.03		300						
		1504	EN				17.03	40.03								
25	P16	1507	BE	ROS	US	70	49° 16.97	134° 40.05	3621				SR	N/A	Comp crash @ 5m	
		1510	EN				16.97	40.08		5					on up cast on	
25	P17	1950	BE	ROS	-	71	49 20 97	135 39 96	3599		-	-	MB	✓	Event 69. PAR cast	
		1953	G				49 20 96	135 39 96		150					PAR ON 0.5m/sec	
		1959	EN				49 20 97	135 39 98							on up cast	

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

Paused @ 170 db to correct wire angle on downcast. Comp crash @ 5m on upcast.

This short file was just to finish of event 69 after a computer crash.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 11 of 18

Month <u>AUG</u>				Year <u>2014</u>			Ship <u>Taney</u>				Cruise ID <u>2014-19</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							
25	P17	2005	BE	ROS	US	72	49 20.97	135 39.96	3642		457-458	2	MB	✓	PAR OFF
		2038	BO				49 20.97	135 40.01		2005					+ Loop SAL + 2 CHL
		2112	EN				49 20.98	135 40.01							
26	P18	0206	BE	ROS	US	73	49 20.97	136 40.00	3818		459-460	2	MB	✓	+ Loop SAL + 2 CHL
		0234	BO				49 20.92	136 40.07		2005					
		0309	EN				49 26.07	136 40.00							
26	P18	0601	BE	CS Loop	-	74	49 20.97	136 40.00	3818						
26	P19	0749	BE	ROS		75	49 29.98	137 39.94	3910		461-462	2	SR	✓	2.7 May
		0821	BO				29.99	39.98		2005					
		0857	EN				29.99	40.03							
26	P19	0857	BE	CS Loop		76	49 29.99	137 40.03					SR		
26	P20	1319	BE	ROS		77	49 33.92	138 40.04	3946	1	463-469	7	SR	✓	Amanda's cast
		1322	BO				33.92	40.05		150					
		1330	EN				33.92	40.07							
26	P20	1343	BE	MPS	UN	78	49 33.91	138 40.10	3946				HG		NO SAMPLES
		1446	BO				33.99	39.98		2000					BAD BATTERY
		1520	EN				49 33.91	138 39.92							WRAP LOOKS GOOD

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

New Fl. cable. Still in of base. Start @ ~ 100m going down, stopped ~ 525m up.

- LOST CONTACT WITH MPS WHEN FIRING NET 1. BATTERIES FAILED UNDER LOAD 8.8V ON THE WAY DOWN
TEST BATS AFTER TOW 2.6, 27, 1.2 FROM NOW ON TEST BATS AFTER EVERY SECOND TOW
REPLACE ALL THREE

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 12 of 18

Month <u>AUGUST</u>				Year <u>2014</u>			Ship <u>TULLY</u>				Cruise ID <u>2014-19</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							
26	P20	1537	BE	ROS	US	79	49 33.96	138 39.99	3945		470-493	24	MR/SR	✓	Deep cast
		1645	BO				33.99	138 40.01		4027					
		1836	EN				34.00	40.00							
26	P20	1853	BE	ROS	-	80	49 34.04	138 39.73	3947		-	-	MR	-	Empty 250.11
		1920	BO				49 34.06	138 39.86		270					
		1931	EN				49 33.77	138 39.91							
26	P20	1936	BE	ROS	-	81	49 33.98	138 39.92	3947		523	-	MR	-	ROS in the water
		1959	BO				49 33.91	138 39.88							49 33.5 138 39.2
26	P20	1949	BE	ROS	US	82	49 33.99	138 39.90	3946		494-505	12	DS MR	-	TMR CAST
		2012	BO				49 33.85	138 39.91		1500					
		2039	EN				49 33.84	138 39.99							
26	P20	2051	BE	ROS	US	83	49 33.92	138 39.93	3948		506-522	17	MR	✓	DRIFT CAST
		2056	BO				49 33.92	138 40.00		300					
		2114	EN				49 33.96	138 40.02							
26	P20	2143	DE	DRF		84	49 34.13	138 45.77	3941						13263 EC ROAST
27	P21	0130	BE	ROS	US	85	49 38.02	139 39.83	3939		524-527	24	MR	✓	ROS OFF
		0204	BO				49 37.72	139 40.04		2005					Cc Sampling
		0245	EN				49 37.72	139 40.05							
27	P21	0120	BE	Cs Loop	-	86	49 38.03	139 39.83	3939		-	-	MR	-	Cc Loop

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

The High temp light came on @ 1500 m, so we paused for 15 mins.

Stop @ 600 m on way down to correct wire angle

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 13 of 18

Month <u>AUG</u>				Year <u>2014</u>			Ship <u>TULLY</u>				Cruise ID <u>2014 19</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Latitude	Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
27	P22	0713	BE	ROS	US	87	49° 42.03	140° 39.79	3877		548-549	2	SR	✓	CHL max 15m?
		0745	BO				42.00	39.79		2005					
		0820	EN				41.97	39.81							
27	P23	1252	BE	ROS	US	88	49° 46.14	141° 39.79	4029		550-551	2	SR	✓	No CHL max
		1326	BO				46.16	39.74		2005					
		1400	EN				46.04	39.81							
27	P23	1255	BE	Loop CS		89	49° 46.14	141° 39.79	4029		552-575	24	SR		Cesium Loop
27	P24	1840	BE	ROS	US	90	49 50.17	142° 39.91	3967		552-575	24	SR/mb	✓	Calculation Chart
		1912	BO				50.18	39.84		2005					
		1944	EN				50.24	39.97							
27	P24	1848	BE	DRF	-	91	49 50.18	142 39.88	3967	-	-	-	MB		Cs Loop
27	P24	1919	BE	DRF	-	92	49 50.25	142 40.18	3967	-	-	-	MB	-	CC 133265
27	P24-P25	2138	BE	ROS	-	93	49 54.11	143 3 35	4054		-	-	MB	✓	100 CHL
		2140	BO				49 54.11	143 3 35		150					100 CHL
		2143	EN				49 54.12	143 3 35							
28	P25	0022	BE	ROS	US	94	50° 00.03	143° 36 27	4127		576-577	2	MB	✓	PAR OFF
		0055	BO				49 59.99	143 36 27		2005					
		0127	EN				50 0 01	143 36 28							
28	P25	0023		Loop CS	-	95	50 00 03	143 36 27	4127	-			MB	-	60 C. Cesium Loop

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014

Notes:

Crept through the first 60 m to determine the CHL max, only to find there wasn't one
SR

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 14 of 18

Month <u>AUG</u>				Year <u>2014</u>			Ship <u>TOLLY</u>				Cruise ID <u>2014-17</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							
28	P35	0441	RG	ROS	US	96	49 59.94	144 18 09	4120		578-579	2	MR	✓	no max
		0514	BO				49 59.94	144 18 11		2005					
		0549	EN				49 59.93	144 18 17							
28	P26	0914	BE	Pump		97	50 00.00	144 59.95	4225	404 100 within	580-582	3	KS DS AR	—	T/M Pumping in CHAINS
		0940	BO				49 59.93	144 59.94							
		1143	EN				49 59.92	144 59.99							
28	P26	1149	BE	ROS	US	98	49° 59.93	144° 59.98	4225		584-607	24	SR	✓	Cesium cast 1
		1154	BO				59.91	59.98		150					
		1201	EN				59.92	59.99							
28	P26	1210	BE	NET	U	99	49° 59.94	145° 0.00	4225				MG	—	
		1224	BO				59.94	0.00		250					
		1233	EN				59.97	0.07							
28	P26	1243	BE	ROS	US	100	49° 59.96	145° 0.12	4225		608-614	7	SR	✓	Amanda's cast
		1249	BO				59.98	0.13		300					
		1259	EN				59.99	0.15							
28	P226	1318	BE	MPS	UN	101	50 0.13	145 0.03	4226				MG	—	NET 5 RIPPED OFF
		1518	BO				0.12	0.03		3000					NO SAMPLE
		1606	EN				0.13	0.03							

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

I went to 300 m for the Bongo data.

NET 5 MUST HAVE GOTTEN CAUGHT ON A HEDGE AND WAS RIPPED OFF THE COA END

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 15 of 18

Month		August		Year		2014		Ship		Tully		Cruise ID		2014-19		Page 12 of 18	
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	P26	1633	BE	RCS	US	102	50° 0.13	145° 0.03	4226		616-632	17	SR	✓	DMS CAST		
		1639	BO				0.13	0.03		300							
		1659	EN				0.13	0.03									
	P26	1744	BO	TMR	UN	103	50 0.12	0.02	4224		633-644	12	KP		TMR CAST		
		1844	EN				50 0.04	144° 59.92		1500					ROSETTE BROKEN + 4 BOTTLES BROKEN		
28	P26	1955	BE	ROS	US	104	50 0 04	144 59 92	4224		645-668	24	MR	✓	DEEP CAST		
		2101	BO				50 0 01	144 59 97		4317					PUR OFF		
		2243	EN				50 0 01	144 59 97									
29	P26	0034	BE	ROS	US	105	49 59 99	145 0 00	4225		669-692	24	MR	✓	CS CAST		
		0042	BO				49 59 99	144 59 99		500							
		0055	EN				49 59 99	144 59 99									
29	P26	0129	BE	Pumps	-	106	49° 59.96	144° 59.91	4226		693-697	5	MR	-			
		0212	BO				59.99	59.97		700					WEIGHT PLUS SONAR		
		0607	BE				59.9964	59.9834							0255 PUMPS START		
		0646	EN				59.9993	59.9843									
29	P26	0800	BE			107	50° 0.00	145° 0.00	4226	300			SR	X	CTD 506 Test cast		
29	P26	0830	BE			108	50° 0.00	145° 0.00	4226	300			SR	X	" " "		

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

Events 107 + 108 were just to test 506 as it was setting off alarms.
Turns out it was a leaking dummy plug on the bottom contact switch bulkhead connector.
SR

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 16 of 18

Month <u>Aug</u>				Year <u>2014</u>			Ship <u>TULLY</u>				Cruise ID <u>201419</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							
29	P26	1136	BE	ROS	US	109	50° 0.00	144° 59.99	4211		698-721	24	SR	✓	Plastics cast
		1247	BO				50° 0.00	144° 59.98		4241					Comp crash @ 175m
		1437	EN			110	50° 00 00	144° 59 98							on upcast
29	P26	1517	BE	Pump		111	49° 59.87	144° 59.85	4226		722-726	5	SR	—	
		~1615	BO				49° 59.87	144° 59.85		1500					+50m Wreck
		2041	BE				49 59 89	144 59 87							
		2132	EN				49 59 89	144 59 87							
29	P26	2135	BE	ROS	US	112	49 59 89	144 59 88	4226		727-749	23	MB	✓	ANALYSIS CASE + DRI
		2206	BO				49 59 89	144 59 88		2000					+ 0m
		2242	EN				49 59 89	144 59 88							
29		2335					49 59 92	144 59 92	4226		750-753	4	MB	✓	
		2338	EN				49 59 92	144 59 92		150					
		2345					49 59 92	144 59 92							
30	P26	0047	BE	Loop	-	114	50 02 04	144 49 87	4195	-	-	-	MB	-	CS Loop
30	P26-curve	0110	DE	DRF	-	115	50 02 30	144 50 03	4195	-	-	-	MB	-	453
		0215	DE	DRF	-	116	50 02 30	144 49 44	4168	-	-	-	MB	-	362
30	PA-008	0328	BE	ROS	US	117	50 02 04	144 51 85	4198		754-756	3	MB	✓	ONAR
		0336	BO				50 02 04	144 51 87		500					closed circuit
		0347	EN				50 01 96	144 51 91							500m @ 111m 24-24

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

This page is for any notes or observations

LAYSAN ALBATROSS PLUS SHEARWATERS + REGULAR ALBATROSS SOUNDER'S SNOW PLANKTON BRUIS NEAR SURFACE

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 17 of 18

Month <u>Aug / Sep</u>		Year <u>2014</u>		Ship <u>2014</u>		Cruise ID <u>2014-19</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							
30	P26	0433	BE	Pumps	-	118	50 00.06	144 55.85	4212			4	MB/S	-	Last pump clamp did not work did not deploy.
		0514	BO				49 59.95	144 59.97		200	757-760				
		0720	BE				49 59.95	144 59.99							
		0740	CN				50 00.00	145 00.18							
30	P26	0746	BE	DRF		119	50 00.03	145 00.18	4212	0			SR		133264 EC drifter dep
30	Loop120	1614	BE	LOOP	UW	120	50 08.67	142 53.21	4029	4.5			MG		9.4 - 9.7 KTS 2CHL 1 SAL
30	Loop121	2109	BE	LOOP	UW	121	50 14.06	141 34.88	4018	4.5			SR		9.9 - 10.1 KTS
31	Loop122	0012	BE	LOOP	UW	122	50 17.32	140 46.74		4.5					Loop 122 1 CHL
31	Loop123	0012	BE	LOOP	UW	123	50 17.32	140 46.74		4.5					Loop 123 1 CHL
31	Loop124	1104	BE	LOOP	UW	124	50 28.91	137 57.80	4304	4.5			EA		Loop 124 1 CHL
31	Loop125	1511	BE	LOOP	UW	125	50 33.13	136 53.76	4325	4.5					2CHL 1 SAL 10-11 KTS
31	Loop126	1600	BE	LOOP	UW	126	50 34.00	136 40.24	4300	4.5			RJ		Cs Loop 60L
31	Loop127	2005	BE	LOOP	UW	127	50 38.40	135 34.82	4310	4.5	Loop 127		EA		Loop 127 1 CHL
31	Loop128	2059	BE	LOOP	UW	128	50 39.40	135 20.94	4301	4.5	Loop 128		SR		2CHL/1SAL
31	Loop129	2346	BE	LOOP	UW	129	50 42.202	134 38.246	4356	4.5	-		RJ		Cs loop 60L
31	Loop130	0433	BE	LOOP	UW	130	50 47.347	133 24.974	4300	4.5	loop 130				EA 1 CHL
1	Loop131	0456	BE	LOOP	UW	131	50 47.347	133 20.27	4325	4.5	Loop 131				2CHL 11 SAL
1	loop132	0731	BE	Loop	UW	132	50 50.154	132 42.328	4309	4.5			RJ		Cs loop 60L
1	loop133	0833	BE	Loop	UW	133	50 58.346	130 40.710	2334	4.5	loop 133		EA		1 CHL 1 CHL

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 7 July 2014

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 18 of 18

[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

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 & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 7 July 2014