

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2011-17

DATE:

From: 1 SEPTEMBER

to: 13 SEPTEMBER 2011

VESSEL:

JOHN P TULLY

PROJECT(S):

LA Pérouse - WCVI

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

WaterProperties.ca

Captain: MIKE CORFIELD First Officer: RICHARD MARRIOTT
Second Officer: SHANE LOVEAGE Third Officer: JIM BENNETT
Fishing Master: _____

Mission Participants / Agencies: IOS, UBC, UVIC

Scientific Personnel:			Chief Scientist: <u>DOUG VELLAND</u>		
Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of Mission:			Chief Scientist: _____		
Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Data logging computer: #3

Data acquisition program: Scasave
CTD deck unit make: SBE model: 11 serial number: 0471

Primary CTD

Make: SBE model: 9+ serial number: 0550
Primary temperature serial number: 2374
Primary conductivity serial number: 3396
Secondary temperature serial number: 2668
Secondary conductivity serial number: 2754
Transmissometer: Wet Labs Model: _____ s/n: 1396DR
Fluorometer: Model Wet Labs ECO Cable gain: 25 s/n: 2216 P, S or NO pump?
Oxygen sensor: SBE 43 Model: 43 s/n: 1176 P, S or NO pump?
PAR sensor: BIOSPHERICAL Model: _____ s/n: 4601
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?

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): _____

Captain: MIKE CORFIELD First Officer: RICHARD HARRIOTT
Second Officer: SHANE LOVELACE Third Officer: JIM BENNETT
Fishing Master: _____

Mission Participants / Agencies: IOS, UBC, UVIC

Scientific Personnel:		Chief Scientist: <u>DOUG VELLAND</u>			
Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of Mission:		Chief Scientist: _____			
Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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CTD deck unit make: SBE model: 11 serial number: 0471

Primary CTD
Make: SBE model: 9+ serial number: 0550
Primary temperature serial number: 2374
Primary conductivity serial number: 3396
Secondary temperature serial number: 2668
Secondary conductivity serial number: 2754
Transmissometer: Wet Labs Model: _____ s/n: 1396DR
Fluorometer: Model Wet Labs ECO Cable gain: 25 s/n: 2216 P, S or NO pump?
Oxygen sensor: SBE 43 Model: 43 s/n: 1176 P, S or NO pump?
PAR sensor: BIOSPHERICAL Model: _____ s/n: 4601
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?

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): _____

Rosette Setup:

Number of bottles: 24
Manufacturer: IOS
Volume of bottles (litres): 10 L

Winches:

1. Make: HAWBOLDT Model: _____ Serial #: 17026 Used for: _____
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

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

Salinometer:

Make: _____ Model: _____ Serial Number: _____

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

Oxygen Kit(s):

Make: METROM Model: 765 Dosimeter Kit Number: #2
Make: _____ Model: _____ Kit Number: _____

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

Thermosalinograph System (SBE21):

Program: Seasave Version: 7.21b S/N 3363
Sampling interval (seconds): 30
Fluorometer sensor serial number: W535-713P

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 ☐

Comments _____

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

Pumps working? Yes ☐ (0011) No ☐ (0010)

Secondary Temp – Primary Temp: _____
(Average from the mixed region)

Secondary Salinity – Primary Salinity: _____
(Average from the mixed region)

Additional Comments:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
Sept			2011			Tully			2011-17						
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							
2	L801	1452	BE	ROS	US	1	48° 40.41	124° 59.48	34		1-3	3	SR	✓	Wire was off the reel and
		1454	BO				48° 40.40	124° 59.48							Shrive, but still
		1456	EN				48° 40.40	124° 59.48							looked fine for use
	L802	1532	BE	ROS	US	2	48° 38.98	125° 2.42	56		4-7	4	SR	X	
		1534	BO				48° 38.98	125° 2.42		48					
		1539	EN				48° 38.98	125° 2.45							
	L803	1604	BE	ROS		3	48° 37.30	125° 5.65	94		/	/	SR	✓	
		1606	BO				48° 37.28	125° 5.66		85					
			EN				48° 37.26	125° 5.67							
	L804	1632	BE	ROS	US	4	48° 35.65	125° 8.77	112		8-15	8	SR	✓	
		1635	BO				48° 35.66	125° 8.77		104					
		1648	EN				48° 35.60	125° 8.83							
	E01	1755	BE	ROS		5	48° 31.70	125° 3.82	117		/	0	SR	✓	
		1758	BO				48° 31.71	125° 3.82		107					
		1801	EN				48° 31.72	125° 3.81							
	E01	1814	BE	NET		6	48° 31.67	125° 3.84	117						
		1818	BO				48° 31.68	125° 3.84		107					
		18:00	EN				48° 31.68	125° 3.83							

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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The wire just popped off the shire at the start of deployment, so very little lead was involved

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Sept			2011			Tully			2011-17						
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							
2	L B05	1905	BE	ROS	—	7	48° 34.01	125° 12.07	102		—	Ø	MR	✓	
		1908	BO				48° 34.00	125° 12.10		92					
		1910	EN				48° 34.01	125° 12.10							
2	L B06	1938	BE	ROS	US	8	48° 32.18	125° 15.52	115		16-23	8	MR	✓	
		1941	BO				48° 32.18	125° 15.51		106					
		1949	EN				48° 32.19	125° 15.50							
2	C1	2045	BE	ROS	—	9	48° 28.90	125° 15.35	153				MR	✓	
		2049	BO				48° 28.87	125° 15.36		143	—	Ø			
		2052	EN				48° 28.85	125° 15.35							
2	C1	2103	BE	NET	—	10	48° 28.87	125° 15.31	153				MR		
		2108	BO				48° 28.89	125° 15.31		143					
		2111	EN				48° 28.91	125° 15.30							
2	C2	2155	BE	ROS	—	11	48° 26.23	125° 09.33	161				MR	✓	
		2158	BO				48° 26.24	125° 09.33		150	—	Ø			
		2201	EN				48° 26.24	125° 09.35							
2	C2	2210	BE	NET		12	48° 26.21	125° 09.38	161				MR		
		2215	BO				48° 26.24	125° 09.33		156					
		2219	EN				48° 26.24	125° 09.33							

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Month			Year			Ship			Cruise ID						
September			2011			TULLY			2011-17						
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							
2	C3	2320	BE	ROS	-	13	48° 23.43	125° 20.78	124		-	Ø	MR	✓	
		2323	BO				48° 23.38	125° 20.76		115					
		2326	EN				48° 23.37	125° 20.78							
2.	C3	2334	BE	NET	-	14	48° 23.30	125° 20.65	124				MG		
		2338	BO				48° 23.33	125° 20.66		114					
		2340	EN				48° 23.33	125° 20.67							
3	L307	0031	BE	ROS		15	48° 28.63	125° 22.08	158				MR	✓	
		0034	BO				48° 28.62	125° 22.09		148	-	Ø			
		0038	EN				48° 28.63	125° 22.08							
3	L307	0048	BE	NET		16	48° 28.68	125° 22.04	158				MG		
		0052	BO				48° 28.67	125° 22.05		148					
		0054	EN				48° 28.66	125° 22.05							
3	B8	0156	BE	ROS		17	48° 34.49	125° 29.97	116				MR	✓	
		0159	BO				48° 34.48	125° 30.00	121	114	-	Ø			
		0201	EN				48° 34.48	125° 29.99							
3	B8	0210	BE	NET		18	48° 34.50	125° 30.00	120				MG		
		0214	BO				48° 34.50	125° 30.01		114					
		0216	EN				48° 34.50	125° 30.02							

Month			Year			Ship			Cruise ID						
Sept			2011			TULLY			2011-17						
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							
3	B7	0257	BE	ROS	-	19	48° 31' 96	125° 35.51	79		-	Ø	MR	✓	
		0259	BO				48° 31' 96	125° 35.52		68					
		0301	EN				48° 31' 96	125° 35.53							
3	B7	0309	BE	NET		20	48° 31' 98	125° 35.58	79				MG		
		0311	BO				48° 31' 99	125° 35.59		68					
		0313	EN				48° 31' 98	125° 35.59							
3	LB08	0416	BE	ROS	US	21	48° 25.27	125° 28.58	135				MR	✓	
		0420	BO				48° 25.28	125° 28.57		130	25-34	11			
		0432	EN				48° 25.29	125° 28.61							
3	LB08	0438	BE	NET		22	48° 25.29	125° 28.60	135				MG		
		0445'	BO				48° 25.30	125° 28.61							
		0448	EN				48° 25.28	125° 28.62							
3	LB09	0533	BE	ROS	US	23	48° 21' 96	125° 34.82	150				MR	✓	
		0536	BO				48° 21.96	125° 34.79		140	35-45	11			
		0546	EN				48° 21' 96	125° 34.83							
3	LB10	0627	BE	ROS	-	24	48° 18.56	125° 41.28	151				MR	✓	
		0631	BO				48° 18.54	125° 41.33		142	-	Ø			
		0633	EN				48° 18.55	125° 41.31							

Cast Type:

ROS = Rosette plus CTD

CTD = CTD without Rosette

BOT = Bottle cast, no CTD

SET = Fish Set

USW = Sea Water Loop

DRF = Drifter

MOR = Mooring

NET = Plankton Net Haul

Notes:

DN = Down / No stop

US = Up / Stop

UN = Up / No stop

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RE = Recover Mooring Time

MR = Messenger Release Time

DE = Deployment Time

BO = Bottom Time of Cast

EN = End Time of Cast

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

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Version: 16 April 2010

Month		SEPTEMBER		Year		2011		Ship		TULLY		Cruise ID		2011-17	
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							
3	LB11	0715	BE	ROS	US	25	48° 15.19	125° 47.71	205		46-58	13	SR	✓	
		0719	BO				48° 15.15	125° 47.75							
		0736	EN				48° 15.19	125° 47.73							
	LB11	08:25	BE	NET		26	48° 15.17	125° 47.71							
		08:31	BO				(48° 15.19)	(125° 47.74)	205				SR		
		08:34	EN				48° 15.20	125° 47.72		195					
	LB12	0908	BE	ROS	US	27	48° 12.90	125° 51.83	508		59-75	17	SR	✓	
		0920	BO				48° 12.90	125° 51.87		500					
		0948	EN				48° 12.91	125° 51.88							
	LB13	1035	BE	ROS		28	48° 10.56	125° 56.12	915				SR	✓	
		1053	BO				48° 10.60	125° 56.09		908					
		1109	EN				48° 10.57	125° 56.12							
	LB14	1141	BE	ROS	US	29	48° 8.46	125° 59.93	1170		76-95		SR	✓	
		1159	BO				48° 8.46	125° 59.92							
		1240	EN				48° 8.43	125° 59.90							
	LB15	1356	BE	ROS		30	48° 4.36	126° 8.45	1547				SR	✓	PAR OFF
		1427	BO				48° 4.35	126° 8.49							fired bottle 1+2
		1456	EN				48° 4.36	126° 8.37							for Nth Standard
															water for Janet

Event 29

I fired bot 16 @ 16m when I should have fired bot 19. I changed the labels to correct it though.
Also, I fired bot 22 for Janet's Nth Standard water, but dumped it by accident in all the confusion.

Month <u>Sept</u>			Year <u>2011</u>			Ship <u>Tully</u>			Cruise ID <u>2011-17</u>		
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Information		Comments
							Latitude	Longitude	Bottom Depth	Max Depth	
3	LB16	1546	BE	ROS		31	48° 0.52	126° 16.99	1787	1779	SR
		1623	BO				48° 0.53	126° 17.01			
		1655	EN				48° 0.54	126° 17.03			
3	LC12/A4	1920	BE	ROS	✓	32	48° 15.00	126° 40.01	2524		MR ✓
		1956	BO				48° 14.99	126° 40.00		2005	
		2031	EN				48° 14.99	126° 40.01			
3	LC12/A4	2040	BE	NET		33	48° 14.99	126° 40.03	2522		
		2047	BO				48° 14.99	126° 40.05		250	
		2052	EN				48° 15.00	126° 40.05			
4	LC11	0019	BE	ROS	US	34	48° 18.91	126° 26.65	1451		MR ✓
		0047	BO				48° 18.94	126° 26.69		1450	
		0127	EN				48° 18.93	126° 26.75			
4	LC10	0210	BE	ROS	—	35	48° 22.39	126° 20.19	1247		MR ✓
		0233	BO				48° 22.39	126° 20.19		1240	
		0256	EN				48° 22.39	126° 20.18			
4	LC09/A3	0342	BE	ROS	US	36	48° 25.92	126° 13.69	605		MR ✓
		0353	BO				48° 25.91	126° 13.69	607	600	
		0418	EN				48° 25.93	126° 13.68			

Cast Type:
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SET = Fish Set

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NET = Plankton Net Haul
DRF = Drifter

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

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

Notes:

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Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULCY			2011-17						
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							
4	LC09/A3	04:32	BE	NET		37	48° 25.93	126° 13.68	607	250			ME		
		04:40	BO				48° 25.94	126° 13.69							
		04:45	EN				48° 25.93	126° 13.70							
4	A2	05:39	BE	ROS	—	38	48° 22.67	126° 03.79	355		—	Ø	MR	✓	
		05:46	BO				48° 22.69	126° 03.79		345					
		05:52	EN				48° 22.69	126° 03.82							
4	A2	06:02	BE	NET		39	48° 22.70	126° 03.81	347						
		06:10	BO				48° 22.71	126° 03.82		250					
		06:14	EN				48° 22.71	126° 03.81							
4	LC08/A1	07:15	BE	ROS		40	48° 29.42	126° 7.09	198		136-148	13	SR	S	
		07:20	BO				48° 29.43	126° 7.06		188					
		07:38	EN				48° 29.44	126° 7.08							
4	LC08/A1	8:12	BE	NET		41	48° 29.44	126° 07.06	198		—		SR		
		8:18	BO				48° 29.45	126° 07.06		185					
		8:21	EN				48° 29.45	126° 07.08							
4	LC07	09:04	BE	ROS		42	48° 32.96	126° 0.47	128		—		SR	✓	
		09:07	BO				48° 32.96	126° 0.45		119					
			EN				48° 32.97	126° 0.46							

Cast Type:
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Sept			2011			Tully			2011-17						
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							
4	LC06/B6	9:52	BE	NET		43	48° 36.47	125° 54.04					SR		Borgo
		9:55	BO				48° 36.49	125° 54.04		82					
		9:57	EN				48° 36.50	125° 54.04							
4	LC06/B6	10:09	BE	ROS		44	48° 36.48	125° 53.96	92		149-157		SR	✓	didn't fire bot + took water from b
		10:11	BO				48° 36.49	125° 53.97		84					
		10:20	EN				48° 36.50	125° 54.01							
4	LC05	11:05	BE	ROS		45	48° 39.94	125° 47.38	64				SR	✓	
		11:07	BO				48° 39.94	125° 47.37		57					
		11:08	EN				48° 39.94	125° 47.36							
4	LC04	11:58	BE	NET		46	48° 43.469	125° 40.783	167						Borgo
		12:01	BO				48° 43.481	125° 40.780		157					
		12:05	EN				48° 43.52	125° 40.76							
4	LC04	12:17	BE	ROS		47	48° 43.48	125° 40.78	167		158-169	12	SR	✓	
		12:26	BO				48° 43.43	125° 40.85							
		12:40	EN				48° 43.44	125° 41.05							
4	LC03	13:25	BE	ROS		48	48° 47.01	125° 34.17	135				SR	✓	
		13:28	BO				48° 47.01	125° 34.17		127					
		13:30	EN				48° 47.02	125° 34.19							

Cast Type:

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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:

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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:

Produced by the Water Properties Group, IOS

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
Sept			2011-			Tully			2011-17						
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							
4	LC02	1357	BE	ROS		44	48° 48.69	125° 30.91	110		170-178	9	SR	✓	
		1406	BO				48° 48.69	125° 30.91							
		1409	EN				48° 48.70	125° 30.93							
4	LC01	1439	BE	ROS	US	50	48° 50.43	125° 27.76	97		179-186	8			very goopy (reddish)
		1441	BO				48° 50.42	125° 27.73							
		1450	EN				48° 50.37	125° 27.76							
4	LD01	1629	BE	ROS		51	49° 0.10	125° 43.83	34				SR	✓	PAR on
		1630	BO				49° 0.10	125° 43.83		27					
		1631	EN				49° 0.10	125° 43.83							
4	LD02	1659	BE	NET		52	48° 58.37	125° 46.98	44				SR		
		1700	BO				48° 58.36	125° 46.99		35					
		1702	EN				48° 58.36	125° 46.99							
4	LD02	1718	BE	ROS		53	48° 58.36	125° 47.00	44				SR	✓	
		1719	BO				48° 58.37	125° 47.01		34					
		1720	EN				48° 58.37	125° 47.01							
4	LD03	1747	BE	ROS		54	48° 56.63	125° 50.37	47				SR	✓	
		1748	BO				48° 56.63	125° 50.37		38					
		1749	EN				48° 56.63	125° 50.37							

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Produced by the Water Properties Group, IOS

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship									
SEPTEMBER			2011			TULLY									
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	LDO4	1835	BE	ROS	US	55	48° 53.17	125° 56.99	62		187-193	7	SR	✓	
		1837	BO				48° 53.17	125° 56.98		53					
		1844	EN				48° 53.17	125° 57.00							
4	LDO4	1855	GE	NET	-	56	48° 53.17	125° 57.03	62	57			MG		Borgo
		1856	BO				48° 53.17	125° 57.03							
		1857	EN				48° 53.17	125° 57.04					MR	✓	
4	LDO5	1940	BE	ROS	-	57	48° 49.64	126° 03.60	90	81	-	φ			
		1943	BO				48° 49.65	126° 03.58							
		1944	EN				48° 49.64	126° 03.57					MR	✓	
4	LDO6	2026	BE	ROS	-	58	48° 46.16	126° 10.19	136	128	-	φ			
		2028	BO				48° 46.17	126° 10.17							
		2031	EN				48° 46.16	126° 10.16							
4	LDO7	2118	BE	ROS	US	59	48° 42.65	126° 16.73	468	165	194-211	18	27	✓	10 m off bottom
		2126	BO				48° 42.65	126° 16.71							
		2151	EN				48° 42.67	126° 16.77							
4	LDO8	2247	GE	ROS	US	60	48° 39.15	126° 23.35	725	769	-	φ			
		2301	BO				48° 39.16	126° 23.38							
		2315	EN				48° 39.16	126° 23.38							

ICSW - Sea Water | 000

Bottle Firing Method:

Time Code:

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: USW = Sea Water Loop
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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
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MR = Messenger Release Time
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULLEY			2011-17						
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							
5	L009	0035	BE	ROS	US	61	48° 35.67	126° 29.99	1055			19	MR	✓	
		0052	BO				48° 35.68	126° 30.00		1050	212-230				
		0131	EN				48° 35.70	126° 29.99							
5	L009	0138	BE	NET		62	48° 35.71	126° 29.91	1051				MR		Borgo
		0145	BO				48° 35.72	126° 29.96		250					
		0149	EN				48° 35.70	126° 29.98							
5	L010	0240	BE	ROS	—	63	48° 32.24	126° 36.54	1472				MR	✓	PAL OFF
		0305	BO				48° 32.22	126° 36.59		1473	—	0			
		0333	EN				48° 32.22	126° 36.56							
5	L011	0426	BE	NET	—	64	48° 28.78	126° 42.95	1590				MR		
		0435	BO				48° 28.78	126° 42.94		250					
		0438	EN				48° 28.78	126° 42.94							
5	L011	0529	BE	ROS	US	65	48° 28.77	126° 42.94	1588				MR	✓	WROG STD NAME IN HEADER, L010 SHOULD BE L011
		0559	BO				48° 28.78	126° 42.89		1595	231-252	22			
		0644	EN				48° 28.76	126° 42.92							
	L609	1055	BE	ROS	WS	66	48° 51.19	127° 19.38	2056		253-272		SR	✓	
		1136	BO				48° 51.19	127° 19.37		2000					
		1236	EN				48° 51.17	127° 19.43							

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DAILY SCIENCE LOG

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Month		Year		Ship		Cruise ID		Page							
Sept		2011		Tulay		2011-17		1 of 1							
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							
5	L609	12:57	BE	NET		67	48° 51.1349	127° 19.3302	2059	250			SR		
		13:05	BO				48° 51.1119	127° 19.3463							
		13:09	EN				48° 51.0986	127° 19.3478							
5	L608	13:54	BE	ROS		68	48° 55.30	127° 13.25	2063				SR	✓	
		14:33	BO				48° 55.30	127° 13.29		2050					
		15:09	EN				48° 55.30	127° 13.27							
5	L607	16:01	BE	ROS		69	48° 59.39	127° 7.21	1757				SR	✓	
		16:34	BO				48° 59.39	127° 7.25		1750					
		17:05	EN				48° 59.41	127° 7.23							
5	L607	17:13	BE	NET		70	48° 59.41	127° 7.21	1757						
		17:17	BO				48° 59.40	127° 7.22		250					
		17:22	EN				48° 59.39	127° 7.23							
5	L606	18:13	BE	ROS	US	71	49° 03.49	127° 01.21	979		276-294	19	SR	✓	PARON
		18:33	BO				49° 03.50	127° 01.18		970					
		19:09	EN				49° 03.50	127° 01.19							
5	L605	19:54	BE	ROS	-	72	49° 07.37	126° 55.34	277				ML	✓	
		20:00	BO				49° 07.38	126° 55.42		270		Ø			
		20:05	EN				49° 07.39	126° 55.41							

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			September			Year			2011			Ship			TULLY			Cruise ID			2011-17		
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															
5	LG04	2049	BE	ROS	US	73	49 11.35	126 49.40	145						✓								
		2052	BO				49 11.32	126 49.45		135	295-305	11	DY MG										
		2105	EN				49 11.30	126 49.44															
5	LG04	2120	BE	NET		74	49 11.28	126 49.45	145				MG										
		2124	BO				49 11.28	126 49.44		135													
		2122	EN				49 11.28	126 49.43															
5	LG03	2209	OE	ROS	-	75	49 15.02	126 43.74	125				MG DY	✓									
		2212	BO				49 15.01	126 43.73		115	-	Ø											
		2215	EN				49 15.01	126 43.71															
5	LG02	2253	BE	ROS	US	76	49 18.69	126 38.12	100				DY	✓									
		2256	BO				49 18.70	126 38.12		90	306-315	10											
		2306	EN				49 18.71	126 38.06															
5	LG02	2315	BE	NET		77	49 18.70	126 38.12	101				MG										
		2318	BO				49 18.70	126 38.12		90													
		2320	EN				49 18.71	126 38.12															
5	LG01	2351	BE	ROS	US	78	49 20.55	126 34.93	52				MR	✓									
		2353	BO				49 20.55	126 34.94		42	316-322	7											
		2357	EN				49 20.54	126 35.00															

Cast Type:

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Month		Year		Ship		Cruise ID									
August 2011		2011		JP Policy		2011-17									
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							
6	LJ01	0309	BE	ROS	-	79	49° 44.33	127° 02.50	61				MR	✓	
		0311	BO				49° 44.32	127° 02.54		52	-	Ø			
		0312	EN				49° 44.32	127° 02.55							
6	LJ02	0338	BE	ROS	-	80	49° 42.63	127° 05.34	84				MR	✓	
		0341	BO				49° 42.63	127° 05.32		75	-	Ø			
		0343	EN				49° 42.61	127° 05.33							
6	LJ02	0351	BE	NET	-	81	49° 42.60	127° 05.30	84				MG		
		0353	BO				49° 42.61	127° 05.29		75					
		0355	EN				49° 42.61	127° 05.28							
6	LJ03	0445	BE	ROS	-	82	49° 39.10	127° 11.00	126				MR	✓	
		0448	BO				49° 39.05	127° 10.99		115	-	Ø			
		0450	EN				49° 39.03	127° 11.02							
6	LJ04	0533	BE	ROS	-	83	49° 35.51	127° 16.86	162				MR	✓	PAR OFF
		0537	BO				49° 35.48	127° 16.90		153	-	Ø			
		0540	EN				49° 35.49	127° 16.90							
6	LJ04	0549	BE	NET		84	49° 35.52	127° 16.88	162						
		0554	BO				49° 35.53	127° 16.87		153					
		0556	EN				49° 35.53	127° 16.87							

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Month		Year		Ship		Cruise ID									
SEPTEMBER		2011		TULLY		2011-17									
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							
6	LJ05	0643	BE	ROS	-	85	49°31.62	127°22.59	1070				MR/SL	✓	
		0705	BO				49°31.62	127°22.53				Ø			
			EN				49°31.65	127°22.60							
6	LJ06	0808	BE	NET	-	86	49°27.88	127°28.52	1033				SR		
		0817	BO				49°27.92	127°28.52		250					
		0821	EN				49°27.93	127°28.51							
6	LJ06	0835	BE	ROS		87	49°27.97	127°28.63	1025				SR	✓	
		0855	BO				49°27.94	127°28.50		1015					
		0915	EN				49°27.92	127°28.45							
6	LJ07	0958	BE	ROS		88	49°24.04	127°34.64	1806				SR	✓	
		1032	BO				49°24.07	127°34.69							
		1104	EN				49°24.05	127°34.75							
6	LJ08	1150	BE	ROS		89	49°20.06	127°40.97	1729				SR		
		1225	BO				49°20.10	127°41.03		1718					
		1254	EN				49°20.10	127°41.01							
6	LJ09	1339	BE	ROS		90	49°16.06	127°47.33	2487						
		1422	BO				49°16.09	127°47.35		2205			SR	✓	
		1458	EN				49°16.08	127°47.34							

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER

Year 2011

Ship TULLY

Cruise ID 2011-17

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							
6	LBP8	1857	BE	ROS	-	91	49°48.62	128°16.75	2074				MR	✓	Sh. name wrong in file
		1936	Bo				49°48.60	128°16.82		2005	-	Ø			
		2010	EN				49°48.59	128°16.78							
6	LBP8	2020	BE	NET		92	49°48.59	128°16.81	2073	250					
		2027	Bo				49°48.59	128°16.86							
		2031	EN				49°48.59	128°16.85	2072						
6	LBP8	2053	BE	LOOP		-	49°55.47	128°14.12	2089	5	-	Ø			ULC SAL
6	LBP7	2114	BE	ROS	US	93	49°52.42	128°11.18	2189					✓	SAL test + profile
		2159	Bo				49°52.41	128°11.19		2005	323-344	22			
		2255	EN				49°52.39	128°11.19							
6	LBP7	2303	BE	NET		94	49°52.37	128°11.14	2191						Bongo to 250m
		2311	Bo				49°52.32	128°11.13		250					
		2315	EN				49°52.32	128°11.10							
7	LBP6	0000	BE	ROS	-	95	49°56.26	128°05.41	780				MR	✓	
		0016	Bo				49°56.24	128°05.45		817	-	Ø			
		0032	EN				49°56.23	128°05.53							
7	LBP5	0114	BE	ROS	US	96	49°59.99	128°00.06	1284				MR	✓	
		0138	Bo				50°00.01	127°59.98		1275	345-364	20			
		0217	EN				49°59.98	128°00.00							

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year			Ship			Cruise ID						
Sept			2011			Tully			2001-17						
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							
7	LBP5		BE	NET		97			1281				MG		
		0234	BO				49 59.98	127 59.96		250					brnjo
		0238	EN				49 59.97	127 59.97							
7	LBP4	0302	BE	ROS	-	98	50° 01' 40	127° 58.13	1027				MR	✓	
		0322	BO				50° 01' 38	127° 58.11		1000	-	Ø			
		0341	EN				50° 01' 39	127° 58.12							
7	LBP3	0412	BE	ROS	US	99	50° 03' 22	127° 55.35	167				MR	✓	
		0416	BO				50° 03' 20	127° 55.38		160	365-376	12			
		0429	EN				50° 03' 22	127° 55.41							
7	LBP3	0438	BE	NET		100	50° 03.20	127° 55.19	169				MG		
		0443	BO				50° 03.18	127° 55.21		156					
		0447	EN				50° 03.19	127° 55.24							
7	LBP2	0509	BE	ROS	-	101	50° 04.03	127° 54.25	100				MR	✓	
		0512	BO				50° 04.04	127° 54.25		88	-	Ø			
		0513	EN				50° 04.03	127° 54.29							
7	LBP2	0522	BE	NET	-	102	50° 04.00	127° 54.25	100				MG		
		0524	BO				50° 03.99	127° 54.26		80					
		0526	EN				50° 03.99	127° 54.26							

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Month		Station		Time		Year		Ship		Cruise ID		2011-17			
Day	Name	(UTC)	Code	Cast Type	Firing Method	Event Number	Positional Latitude	Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
7	LBP1	0549	BE	ROS	-	103	50°04'83	127°52'83	52		-	Ø (24)	MR	✓	24 NISKINS CLOSED JUST TO CLOSING SOAK THEM NO SAMPLE TAKEN. MR
		0551	BO				50°04'82	127°52'85		41					
		0552	EN				50°04'82	127°52'86							
7	OPE2	1051	BE	ROS		104	50°42'49	128°39'88	125			0	SR	✓	
		1054	BO				50°42'49	128°39'85		116					
		1057	EN				50°42'47	128°39'88							
7	CPE2	1106	BE	NET	-	105	50°43'00	128°39'81	126				SR		
		1112	BO				50°43'02	128°39'80		115					
		1114	EN				50°43'03	128°39'80							
7	LQ03	1303	BE	ROS		106	50°39'74	129°1'96	1260				SR	✓	
		1335	BO				56°39'71	129°2'04		1250					
		1409	EN				50°39'70	129°1'99	1248						
7	LQ03	1436	BE	NET		107	50°39'67	129°1'93		250					
		1442	BO				50°39'67	129°1'85							
		1447	EN				50°39'69	129°1'80							
7	OI22	1607	BE	ROS		108	50°39'84	129°17'34	1400				SR	✓	
		1636	BO				50°39'82	129°17'35		1392					
		1700	EN				50°39'80	129°17'37							

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

Notes:

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
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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

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		Year		Ship		Cruise ID								
SEPTEMBER		2011		JP Tully		2011-17								
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
7	JI 22	1707	BE	NET		109	50° 39.80	129° 17.42	1404					
		1717	BO				50° 39.89	129° 17.47		250				
		1721	EN				50° 39.98	129° 17.55						
7	CS00	2038	BE	NET		110	50° 27.68	129° 55.11	2175					Bongo
		2046	BO				50° 27.66	129° 55.00		250				
		2050	EN				50° 27.67	129° 55.01	2175					
7	CS00	2105	BE	NET		111	50° 27.68	129° 55.05		2000				Multinet
		2223	BO				50° 27.60	129° 55.07						
		2312	EN				50° 27.61	129° 55.15						
7	CS00	2333	BE	ROS	-	112	50° 27.64	129° 55.11	2177			MR	✓	
8		0015	BO				50° 27.65	129° 55.02		2005	-	Ø		
		0052	EN				50° 27.68	129° 55.67						
		0212	BE	ROS		113	50° 34.90	129° 41.41	2107		✓	MR	✓	
		0249	BO				50° 34.90	129° 41.48		2005	377-399	23		
		0349	EN				50° 34.93	129° 41.52						
8	CS01	0402	BE	NET		114	50° 34.90	129° 41.51	2107			MC		
		0408	BO				50° 34.91	129° 41.50		250				
		0413	EN				50° 34.89	129° 41.48						

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DAILY SCIENCE LOG

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Month		Year		Ship		Cruise ID									
SEPTEMBER		2011		TULLY		2011-17									
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							
8	CS02	0604	BT	NET		115	50°41'28"	129°27.92'	1905				MG		
		0611	Bo				50°41'26"	129°27'88"		250					
		0615	EN				50°41'24"	129°27.83'							
8	CS02	0639	BT	ROS	-	116	50°41.28	129°27.99	1903				MR	✓	
		0659	Bo				50°41'28"	129°28'01"		1005	-	Ø			
		0718	EN				50°41.29	129°28.02'							
8	CS03	0816	BT	NET	-	117	50°45.59	129°19.98	2						
		0825	Bo				50°45.59	129°19.99		210					
		0828	EN				50°45.60	129°19.99							
8	CS03	0842	BT	ROS	-	118	50°45.63	129°20.01	236			Ø	SR	✓	
		0847	Bo				50°45.65	129°20.02'		228					
			EN				50°45.67	129°20.04'							
8	CS04	0942	BT	NET	-	119	50°49.20	13.10	92						
		0945	Bo				50°49'21"	1,15		82					
		0947	EN				50°49.22	129°13.17'							
8	CS04	1002	BT	ROS		120	50°49.20	129°13.28	102		400-408		SR	✓	
		1005	Bo				50°49.19	129°13.26							
		1017	EN				50°49.14	129°13.18							

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Month		Year		Ship		Cruise ID									
Sept		2011		Tully		2011-17									
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							
8	ODAS	1321	BE	ROS		121	50°50.91	129°54.83	2161		—		SR	✓	
		1405	BO				50°50.91	129°54.91		2005					
		1438	EN				50°50.88	129°54.87							
8	ODAS	1445	BE	NET		122	50°50.90	129°54.88	2101		—		SR		
		1452	BO				50°50.94	129°54.83		250					
		1458	EN				50°50.98	129°54.80							
8	CS3B	1711	BE	ROS		123	51°0.02	129°26.96	220		—		SR	✓	
		1715	BO				51°0.05	129°26.99		211					
		1720	EN				51°0.05	129°27.01							
8	CS3B	1728	BE	NET		124	51°0.03	129°27.05	220		—		SR		
		1735	BO				51°0.04	129°27.06		210					
		1738	EN				51°0.06	129°27.06							
8	CS05	1934	BE	ROS	—	125	50°55.99	129°00.07	64				MR	✓	
		1936	BO				50°55.96	128°59.99		55	—	Ø			
		1937	EN				50°55.94	128°59.98							
8	CS05	1948	BE	NET		126	50°55.93	129°00.12	64				MG		
		1950	BO				50°55.94	129°00.16		55					
		1954	EN				50°55.93	129°00.28							

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Notes:

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Version: 16 April 2010

Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULLY									
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	CS1B	2123	BE	ROS	-	127	50 53.00	128 40.03	73		-		MR	✓	
		2125	BO				50 53.00	128 40.01		63		Ø			
		2126	EN				50 52.99	128 40.00							
8	CS1B	2133	BE	NET	-	128	50 52.97	128 39.87	73						
		2135	BO				50 52.98	128 39.86		65					
		2136	EN				50 52.98	128 39.86							
8	CS06	2256	BE	ROS	-	129	50 59.93	128 51.97	64				MR	✓	
		2258	BO				50 59.97	128 52.02		55	-	Ø			
		2259	EN				50 59.98	128 52.03							
8	CS06	2306	BE	NET	-	130	50 59.95	128 52.05	65				MG		
		2307	BO				50 59.94	128 52.04		55					
		2309	EN				50 59.94	128 52.04							
9	CS07	0038	BE	ROS	US	131	51 04.59	128 43.97	64						
		0040	BO				51 04.61	128 43.97			409-417				
		0047	EN				51 04.69	128 43.97							
9	CS07	0055	BE			132				4					
		0057	BO				51 04.68	128 44.12		55					
		0058						128 44.15							

Transducer/motor to be cleaned before each cast. do not use Ammonia products

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULLY			2011-17						
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							
9	CS08	0148	Be	ROS	—	133	51°08.52	128°36.03	143				MR	✓	
		0151	Bo				51°08.54	128°35.99		135	—	Ø			
		0155	EN				51°08.55	128°35.96							
9	CS08	0202	Be	NET		134	51°08.50	128°35.89	144				MG		
		0206	Bo				51°08.51	128°35.91		138					
		0209	EN				51°08.53	128°35.93							
9	CS09	0302	Be	ROS	US	135	51°12.51	128°27.98	195				MR	✓	
		0307	Bo				51°12.53	128°27.93		184	418-429	12			
		0320	EN				51°12.58	128°27.81							
9	CS09	0330	Be	NET		136	51°12.59	128°27.79	193	185			MC		
		0336	Bo				51°12.64	128°27.72							
		0339	EN				51°12.69	128°27.69							
9	CS10	0430	Be	ROS	—	137	51°16.47	128°19.93	81				MR	✓	PRESSURE ON DECK; 07-0.8-06-05
		0433	Bo				51°16.45	128°19.92		71	—	Ø			
		0434	EN				51°16.45	128°19.92							
9	CS10	0444	Be	NET		138	51°16.44	128°19.98	81				MC		
		0446	Bo				51°16.44	128°19.99		72					
		0448	EN				51°16.44	128°19.99							

Cast Type: USW = Sea Water Loop

BOT = Bottle cast, no CTD

CTD = CTD without Rosette

ROS = Rosette plus CTD

SET = Fish Set

Bottle Firing Method: US = Up / Stop

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Time Code:

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Notes:

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		Year		Ship		Cruise ID		Page						
Sept		2011		Tully		2011-17		24 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
9	M6	0806	BE	ROS		139	51° 42.65	128° 7.40	244			SR	✓	
		0812	BO				51° 42.65	128° 7.40	239					
		0816	EN				51° 42.63	128° 7.39						
9	M5	0842	BE	ROS		140	51° 43.41	128° 3.60	337					
		0846	BO				51° 43.39	128° 3.60	330			SR	✓	
		0854	EN				51° 43.42	128° 3.63						
9	M4	0921	BE	ROS		141	51° 44.66	128° 0.22	429					
		0930	BO				51° 44.63	128° 0.21	422			SR	✓	
		0938	EN				51° 44.62	128° 0.20						
9	M3	1013	BE	ROS		142	51° 46.23	127° 54.55	333			SR	✓	
		1020	BO				51° 46.24	127° 54.65	323					
		1027	EN				51° 46.25	127° 54.65						
9	M2	1042	BE	ROS		143	51° 46.47	127° 53.25	190			SR	✓	
		1046	BO				51° 46.46	127° 53.26	181					
		1050	EN				51° 46.46	127° 53.27						
9	UBC7	1247	BE	ROS	US	144	51° 30.00	127° 49.01	158			3	SR	✓
		1250	BO				51° 30.00	127° 49.01	149	423-425				
		1258	EN				51° 29.98	127° 49.03						

Cast Type: Sea Water Loop

Bottle Firing Method: Time Code:

Cast Type:
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Bottle Firing Method:
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Notes:

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DAILY SCIENCE LOG

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Month			Year			Ship			Cruise ID			Page			
SEPT			2011			Tully			2011-17			23 of 23			
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							
9	UBC7	1305	BO	NET		145	51° 29.99	127° 49.01	158						UBC sampling
		1310	BE				51° 29.98	127° 49.00		147					
		1313	EN				51° 29.98	127° 48.98							
9	Ri1	1426	BE	ROS	625	146	51° 26.39	127° 38.15	330				SR	✓	meal vessel @
		1433	BO				51° 26.44	127° 38.15		320	428-430	3			40 m (winch stopped)
		1442	EN				51° 26.42	127° 38.11							
9	Ri1	1447	BE	NET		146	51° 26.40	127° 38.09	330						
		1452	BO				51° 26.41	127° 38.09		320					
		1457	EN				51° 26.40	127° 38.08							
9	Ri2	1540	BE	ROS		147	51° 31.24	127° 33.61	331		+1-43	8	SR	✓	
		1546	BO				51° 31.20	127° 33.61		322					
		1601	EN				51° 31.21	127° 33.75							
	Ri2	1607	BE	NET		148	51° 31.23	127° 33.60	331				SR		Kaelyn
		1612	BO				51° 31.19	127° 33.64		250					
		1616	EN				51° 31.17	127° 33.70							
	Ri2	1626		NET		149	51° 31.29	127° 33.57	332				SR		UBC
		1635					51° 31.25	127° 33.25		323					
		1641					51° 31.20	127° 33.57							

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

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

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

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Month			Year			Ship			Cruise ID						
SEPT			2011			Tully			2011-17						
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							
9	R13	1729	BE	ROS		150	51° 35.90	127° 32.08	328				SR	✓	
		1735	BO				51° 35.91	127° 32.08			440-442	3			
		1744	EN				51° 35.92	127° 32.13							
	R13	1750	BE	NET		151	51° 35.92	127° 32.14	327						bottom no good
9		1755	BO				51° 35.91	127° 32.14		317					CHANGE TO OFFICE SET
		1801	EN				51° 35.92	127° 32.14							
	R13	1907	BE	NET		152									
		1913	BO				51° 35.94	127° 32.08	327	310					
		1918	EN				51° 35.94	127° 32.07							
9	R14	2001	BE	ROS		153	51° 38.94	127° 26.71	300		445-447		MR	✓	
		2007	BO				51° 38.93	127° 26.72		290	443-445	3			
		2016	EN				51° 38.91	127° 26.71							
9	R14	2022	BE	NET		154	51° 38.90	127° 26.71	200						
		2031	BO				51° 38.88	127° 26.69		290					
		2039	EN				51° 38.87	127° 26.70							
9	R15	2119	BE	ROS		155	51° 40.73	127° 19.98	202				MR	✓	
		2124	BO				51° 40.73	127° 19.98		193	450-452	3			
		2130	EN				51° 40.72	127° 19.99							

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Month		Year		Ship		Cruise ID		Page							
SEPTEMBER		2011		TULLY		2011-17		27 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							
9	Ri S	2136	BE	NET		156	51° 40.70	127° 19.97					MG		
		2142	BO				51° 40.66	127° 19.96		190					
		2147	EN				51° 40.66	127° 19.94							
9	Ri S	2215	BE	MPs	UN	157	51° 40.69	127° 19.92	201				MG		
		2222	BO				51° 40.76	127° 19.91		192					
		2227	EN				51° 40.71	127° 19.93							
9	Ri G	2250	BE	ROS	US	158	51° 40.52	127° 17.06	146						
		2254	BO				51° 40.51	127° 17.04		136	455-457	3	MR	✓	MISC 4-24 closed @ surface just to clear it from no sampling done.
		2301	EN				51° 40.48	127° 17.03				(24)			
9	Ri G	2308	BE	NET		159	51° 40.49	127° 17.04	145				MG		
		2312	BO				51° 40.50	127° 17.02		138					
		2315	EN				51° 40.50	127° 17.02							
10	SS7	0319	BE	ROS		160	51° 24.71	127° 47.61	124				MR	✓	
		0323	BO				51° 24.71	127° 47.59		114					
		0325	EN				51° 24.71	127° 47.57							
10	SS6	0430	BE	ROS		161	51° 19.99	128° 00.01	178				MR	✓	
		0434	BO				51° 20.02	127° 59.91		170					
		0437	EN				51° 20.05	127° 59.87							

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DAILY SCIENCE LOG

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Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULLY			2011-17						
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							
10	SS6	0446	BE	NET	-	162	51° 20.01	127° 59.94	178				MG		
		0451	Bo				51° 20.01	127° 59.96		170					
		0454	EN				51° 20.01	127° 59.97							
10	SS5	0721	BE	ROS		163	51° 27.99	128° 30.05	202				SR		
		0725	Bo				51° 28.06	128° 30.04		192					
		0729	EN				51° 28.01	128° 30.05							
10	SS4	0948	BE	NET		164	51° 20.98	129° 00.03	241						
		0956	Bo				51° 20.98	129° 00.04		230					
		1000	EN				51° 20.97	129° 00.06							
10	SS4	1014	BE	ROS		165	51° 20.97	129° 0.00	240				SR	✓	
		1019	Bo				51° 20.97	129° 0.03		231					
		1024	EN				51° 20.96	129° 0.04							
10	SS3	1159	BE	ROS		166	51° 14.99	129° 21.33	290				SR	✓	Stopped at 215m
		1206	Bo				51° 15.02	129° 21.36		280					to check altimeter
		1212	EN				51° 15.07	129° 21.29							readings
	SS2	1345	BE	ROS		167	51° 12.99	129° 42.97	581				SR	✓	
		1355	Bo				51° 12.99	129° 42.94		571					
		1406	EN				51° 12.97	129° 42.97							

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

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 16 April 2010

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
SEPTEMBER			2011			TULLY			2011-17						
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							
11	CPE1	0033	BE	ROS	-	169	51°00.03	127°50.01	140				ME	✓	
		0036	BO				51°00.03	127°50.04		130	-	✓			
		0038	EN				51°00.02	127°50.06							
11	CPE1	0047	BE	NET		170	50°59.99	127°50.00	148				MG		
		0051	BO				51°00.01	127°49.97		130					
		0053	EN				51°00.02	127°49.95							
11	CPF2	2327	BE	ROS	-	171	49°27.96	124°29.96	327				MR	✓	
		2334	BO				49°27.91	124°29.88		318	-	✓			
		2339	EN				49°27.95	124°29.92							
11	CPF2	2348	BE	NET		172	49°28.00	124°30.02	328				MG		
		2358	BO				49°28.02	124°30.01		318					
12		0003	EN				49°28.03	124°29.98							
12	GEO1	0340	BE	ROS	-	173	49°14.96	123°44.97	402				MR	✓	
		0348	BO				49°14.99	123°44.96		392	-	✓			
		0355	EN				49°15.00	123°44.98							
12	GEO1	0402	BE	NET		174	49°15.00	123°45.00	403				MG		
		0415	BO				49°14.99	123°44.98		392					
		0421	EN				49°15.00	123°45.00							

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