DAILY SCIENCE LOG BOOK

MISSION NUMBER 2010-69

DATE: From: Sep. 14 2010 to: Sep. 22, 2010

VESSEL: CCGS J. P. Tully

PROJECT(S): La Perouse, Aquaculture, Effingham Neptune.

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

WaterProperties.ca

Captain: Andy Quay First Officer: Don Gibson
Second Officer: Shane Third Officer: Jim
Fishing Master: _____

Mission Participants / Agencies: IOS OSD / Neptune Canada

Scientific Personnel: Chief Scientist: Tom Juhász

Name	Watch	Cabin	Name	Watch	Cabin
Dave Spear					
Scott Rose					
Isto Prokki					
Ian Beliveau					
Josh Zotzman					
Shane Reierson					
Lucius Perreault					

Second leg of Mission: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: _____
Data acquisition program: _____
CTD deck unit make: _____ model: _____ serial number: _____

Primary 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?**

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): _____

2010-69 casts 1-15

PSA file: C:\DATA\2010-14\comp comms setup.psa

Date: 09/19/2010

Instrument configuration file: C:\Documents and Settings\Stephen\Desktop\Config files\443 AUG 22-2010.con

Configuration report for SBE 911plus/917plus CTD

```
Frequency channels suppressed : 0
Voltage words suppressed      : 0
Computer interface            : RS-232C
Scans to average              : 1
NMEA position data added      : Yes
NMEA depth data added         : No
NMEA time added               : No
NMEA device connected to      : PC
Surface PAR voltage added     : Yes
Scan time added               : No
```

1) Frequency 0, Temperature

```
   Serial number : 4752
   Calibrated on : 06-mar-07
   G             : 4.35918561e-003
   H             : 6.36778987e-004
   I             : 2.08949224e-005
   J             : 1.77207208e-006
   F0            : 1000.000
   Slope         : 1.00000000
   Offset        : 0.0000
```

2) Frequency 1, Conductivity

```
   Serial number : 2173
   Calibrated on : 07-may-08
   G             : -1.06098031e+001
   H             : 1.45381747e+000
   I             : -2.52500312e-003
   J             : 2.46549485e-004
   CTcor         : 3.2500e-006
   CPcor         : -9.57000000e-008
   Slope         : 1.00000000
   Offset        : 0.00000
```

3) Frequency 2, Pressure, Digiquartz with TC

```
   Serial number : 63507
   Calibrated on : 11-Dec-09
   C1            : -4.435468e+004
   C2            : -1.845750e-001
   C3            : 1.192740e-002
   D1            : 3.979900e-002
   D2            : 0.000000e+000
   T1            : 2.993572e+001
   T2            : -3.336200e-004
```

```
T3              : 3.759160e-006
T4              : 1.565300e-009
T5              : 0.000000e+000
Slope           : 0.99989000
Offset          : 6.52380
AD590M          : 1.283280e-002
AD590B          : -9.295010e+000
```

4) Frequency 3, Temperature, 2

```
Serial number : 2968
Calibrated on : 22-Aug-07
G             : 4.30513771e-003
H             : 6.39409837e-004
I             : 2.16871714e-005
J             : 1.92072744e-006
F0            : 1000.000
Slope         : 1.00000000
Offset        : 0.0000
```

5) Frequency 4, Conductivity, 2

```
Serial number : 2399
Calibrated on : 13-Jun-08
G             : -1.08340397e+001
H             : 1.61622754e+000
I             : 9.25453530e-004
J             : 3.32201899e-005
CTcor         : 3.2500e-006
CPcor         : -9.57000000e-008
Slope         : 1.00000000
Offset        : 0.00000
```

6) A/D voltage 0, Transmissometer, Chelsea/Seatech/WET Lab CStar

```
Serial number : 1185dr
Calibrated on : Aug- 15-2010
M             : 19.2359
B             : -1.0964
Path length   : 0.250
```

7) A/D voltage 1, Oxygen, SBE 43

1483

```
Serial number : 1438
Calibrated on : 03-feb-09
Equation      : Sea-Bird
Soc           : 3.73900e-001
Offset        : -5.07200e-001
A             : -9.55410e-004
B             : 1.31980e-004
C             : -2.76350e-006
E             : 3.60000e-002
Tau20         : 1.07000e+000
D1            : 1.92630e-004
D2            : -4.64800e-002
H1            : -3.30000e-002
H2            : 5.00000e+003
```

```
   H3            : 1.45000e+003

8) A/D voltage 2, Fluorometer, Seapoint

   Serial number : 2356
   Calibrated on :
   Gain setting  : 3 x, 0-50 µg/l
   Offset        : 0.000

9) A/D voltage 3, Free

10) A/D voltage 4, Altimeter

    Serial number : 1252
    Calibrated on :
    Scale factor  : 15.000
    Offset        : 0.000

11) A/D voltage 5, Free

12) A/D voltage 6, PAR/Irradiance, Biospherical/Licor

    Serial number        : 4694
    Calibrated on        : 03-Mar-2010
    M                    : 1.00000000
    B                    : 0.00000000
    Calibration constant : 1926782273.59999990
    Multiplier           : 1.00000000
    Offset               : -0.73100000

13) A/D voltage 7, Free

14) SPAR voltage, Unavailable

15) SPAR voltage, SPAR/Surface Irradiance

    Serial number     :
    Calibrated on     :
    Conversion factor : 0.00000000
    Ratio multiplier  : 0.00000000

Scan length                   : 40
---------------------------------------------
Pump Control
   This setting is only applicable to a custom build of the SBE 9plus.
   Enable pump on / pump off commands: YES
   Serial port for 911 pump control: COM5
---------------------------------------------
Data Acquisition:
   Archive data:                    YES
   Delay archiving:                 NO
   Data archive:                    C:\DATA\2010-69\2010-69-0021.hex
   Timeout (seconds) at startup:    30
   Timeout (seconds) between scans: 10
---------------------------------------------
Instrument port configuration:
   Port      = COM4
```

2010-09 casts 11 ...

PSA file: C:\DATA\2010-14\comp comms setup.psa

Date: 09/19/2010

Instrument configuration file: C:\Documents and Settings\Stephen\Desktop\Config files\506 sept 2010.xmlcon

Configuration report for SBE 911plus/917plus CTD

Frequency channels suppressed	: 0
Voltage words suppressed	: 0
Computer interface	: RS-232C
Scans to average	: 1
NMEA position data added	: Yes
NMEA depth data added	: No
NMEA time added	: No
NMEA device connected to	: PC
Surface PAR voltage added	: Yes
Scan time added	: No

1) Frequency 0, Temperature

Serial number	: 2449
Calibrated on	: 06 May 08
G	: 4.35545931e-003
H	: 6.44059884e-004
I	: 2.37472517e-005
J	: 2.31009370e-006
F0	: 1000.000
Slope	: 1.00000000
Offset	: 0.0000

2) Frequency 1, Conductivity

Serial number	: 1764
Calibrated on	: 10-Feb-09
G	: -4.15456884e+000
H	: 4.87496707e-001
I	: -6.43498866e-004
J	: 5.48241113e-005
CTcor	: 3.2500e-006
CPcor	: -9.57000000e-008
Slope	: 1.00000000
Offset	: 0.00000

3) Frequency 2, Pressure, Digiquartz with TC

Serial number	: 0506
Calibrated on	: 26-May-06
C1	: -4.957807e+004
C2	: -1.280011e+000
C3	: 1.485710e-002
D1	: 4.021200e-002
D2	: 0.000000e+000
T1	: 3.037224e+001
T2	: -6.696188e-004

```
   T3              : 3.897170e-006
   T4              : 3.287590e-009
   T5              : 0.000000e+000
   Slope           : 1.00000000
   Offset          : -0.79220
   AD590M          : 1.280810e-002
   AD590B          : -9.210200e+000

4) Frequency 3, Temperature, 2

   Serial number : 2038
   Calibrated on : 06 May 08
   G               : 4.11398392e-003
   H               : 6.20757108e-004
   I               : 1.96374368e-005
   J               : 1.94244564e-006
   F0              : 1000.000
   Slope           : 1.00000000
   Offset          : 0.0000

5) Frequency 4, Conductivity, 2

   Serial number : 3394
   Calibrated on : 06-Mar-09
   G               : -9.62193217e+000
   H               : 1.47516732e+000
   I               : -1.41480227e-003
   J               : 1.92125630e-004
   CTcor           : 3.2500e-006
   CPcor           : -9.57000000e-008
   Slope           : 1.00000000
   Offset          : 0.00000

6) A/D voltage 0, Fluorometer, Seapoint

   Serial number : 2356
   Calibrated on :
   Gain setting  : 3 x, 0-50 µg/l
   Offset          : 0.000

7) A/D voltage 1, Free

8) A/D voltage 2, Transmissometer, Chelsea/Seatech/WET Lab CStar

   Serial number : 1185dr
   Calibrated on : Aug- 15-2010
   M               : 19.2359
   B               : -1.0964
   Path length     : 0.250

9) A/D voltage 3, Oxygen, SBE 43

   Serial number : 1176
   Calibrated on : 10-Mar-09p
   Equation        : Sea-Bird
   Soc             : 3.47800e-001
   Offset          : -5.10900e-001
```

```
   A              : -6.35170e-004
   B              : 1.46690e-004
   C              : -2.65750e-006
   E              : 3.60000e-002
   Tau20          : 1.37000e+000
   D1             : 1.92630e-004
   D2             : -4.64800e-002
   H1             : -3.30000e-002
   H2             : 5.00000e+003
   H3             : 1.45000e+003

10) A/D voltage 4, Altimeter

    Serial number :
    Calibrated on :
    Scale factor  : 15.000
    Offset        : 0.000

11) A/D voltage 5, Free

12) A/D voltage 6, Free

13) A/D voltage 7, Free

14) SPAR voltage, Unavailable

15) SPAR voltage, SPAR/Surface Irradiance

    Serial number     :
    Calibrated on     :
    Conversion factor : 0.00000000
    Ratio multiplier  : 0.00000000

Scan length                    : 40
---------------------------------------------
Pump Control
   This setting is only applicable to a custom build of the SBE 9plus.
   Enable pump on / pump off commands: YES
   Serial port for 911 pump control: COM5
---------------------------------------------
Data Acquisition:
   Archive data:                     YES
   Delay archiving:                  NO
   Data archive:                     C:\DATA\2010-69\2010-69-0021.hex
   Timeout (seconds) at startup:     30
   Timeout (seconds) between scans:  10
---------------------------------------------
Instrument port configuration:
   Port      = COM4
   Baud rate = 19200
   Parity    = N
   Data bits = 8
   Stop bits = 1
---------------------------------------------
Water Sampler Data:
   Water Sampler Type:   SBE Carousel
   Number of bottles:    24
```

Date	Time PDT	This page is for any notes or observations
Sep. 14	0800	- attended meeting on ship and was advised that sailing and loading are delayed due to fuel leaking into the grey-water tank. A delay of 1-3 days was predicted. Boom deployed
	1300	- loading delayed to 1500.
	1500	- commence loading
		- concurrently L-Box (NC) System #2 passes certification at MTC.
		- sailing delayed to 1930
		- the fault with the leaking tank(s) proved to be an undocumented pipe "T" off the transfer pipe between two fuel tanks.
		- this "T" fed into the sludge tank and the valve was open.
	*	- the ship crew went to extensive effort to get the cruise underway in time. This was much appreciated.
	2230	- due to various small delays the ship gets underway heading for mooring DPN1
		- steaming overnight - no watches.

This page is for any notes or observations

Date	Time PDT	
Sep. 15	0730	- en route to DPN1 mooring ETA 1200 - passage through the night was very slow ? - no explanation. - I was expecting to be on station in the morning
		- setting up mooring instruments.
	1310	- arrive on site DPN1-C for recovery - some start up and connection problems - on plotted position we are 370-ish m. away slant range. - the mooring had moved perhaps. - required triangulation to get on to its position * - switching to dunking transducer. 286 - 284 m dunking Tx works great.
	1440	- stopped over 194 - 192 - 185
	1417	- 214 m - 230 m sent release code got rec'd + executed.
	1419	- sighted. - VHF working. * RCM7 9143 rotor missing.
	1440	- On deck - preparing DP2-A for deployment.
	1757	- deployed mooring DP2-A in 102.86 m (lab. sounder) at: 49° 59.254' 125° 11.953

- ram sounder worse + set narrow.
- switched hull.
- solved made contact

recovery posi from bridge
49° 57.8776'
125° 08.5518'

* we get several - good hits then lose it.

Date Time (PDT)

This page is for any notes or observations

Sep. 15 1805 -head for SutChan etc. Aquaculture CTD's

-CTD's will continue until we pass the narrows at app 0600 Sep. 16

15/14:00
DPN1-C
FOUND IN POS'N
49°57.8776'N
125°08.5518'W

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month | Year | Ship | Cruise ID | Page _____ of _____

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	SUTCHAN2	0238	BE	ROS	US	1	50° 4.44	125° 7.38	258		1-13	13	SR	✓	Bottle 7 didn't
		0245	BO				50° 4.41	125° 7.40		252					Fire
		0301	EN				50° 4.41	125° 7.37							
16	SUCHAN1	0411	BE	ROS	US	2	50° 10.05	125° 1.57	457		14-28	15	SR	✓	
		0420	BO				50° 10.04	125° 1.65		452					
		0441	EN				50° 10.04	125° 1.58							
16	DEPASS	0549	BE	ROS	US	3	50° 16.11	124° 58.98	500		29-43	15	SR	✓	
		0558	BO				50° 16.10	124° 59.03		494					
		0625	EN				50° 16.11	124° 58.97							
16	PrChan	0724	BE	ROS	US	4	50° 17.85	124° 49.51	507		44-58		SR	X	
		0736	BO				50° 17.82	124° 49.59		498					
		0759	EN				50° 17.84	124° 49.81							
17	LBP1	2257	BE	CTD		5	50°4.806	127° 52.778	53						
		2302	BO				.775	.794		48					
		2303	EN				50°4.770	127°52.795				7			
18	LBP2	2324	BE	ROS	US	6	50° 4.008	127° 54.210	99		59-65	7			
		2333					50° 4.006	127° 54.268		92					
		2340	EN				50° 3.983	127 54.347							

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: 06 March 2008

Date Time PDT

This page is for any notes or observations

Sep. 16 - 0735 - on station NCI-B mooring for recovery
- rngs = 279, 280. m. in 262 m water
- diagnostic = 5.134 - 3.000 2.134 AR861 #739

```
   2.134
     4.1
   ------
   21.34
  85.28
  ------
  87.414 volts
```

0745 - at location to release
- sent rng = 350 m sent release 353 m
- respouded rec'd + execu'd
- sighted on surface

- recovered and cleaned up en route to DPI

- NB: We need a better way to secure ADCP ↔ battery external cables. There is too much stress applied to bulkhead connectors, thus we get cable failures!

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month	Year	Ship	Cruise ID

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
18	LBP3	0045	BE	ROS		7	50° 3.19	127° 55.32	167				SR	✓	
		0049	BO				50° 3.17	127° 55.35		162					
		0052	EN				50° 3.15	127° 55.38							
18	LBP4	0232	BE	ROS	US	8	50° 1.41	127° 58.16	1092				SR	X	PAR off
		0253	BO				50° 1.39	127° 58.19		1084	66-84				
		0330	EN				50° 1.41	127° 56.24							
18	LBP5	0511	BE	ROS	US	9	50° 0.04	128° 0.02	1292		85-103		SR	✓	
		0537	BO				50° 0.02	128° 0.08		1282					
		0619	EN				50° 005	128° 0.07							
18	LBP6	0708	BE	ROS		10	49° 56.29	128° 5.53	780				SR	✓	
		0725	BO				49° 56.25	128° 5.47		768					
		0738	EN				49° 56.23	128° 5.50							
18	LBP7	0826	BE	ROS	US	11	49° 52.40	128° 11.11	2222		104-125		SR	X	bottle # 4 fired @ 1500m
		0904	BO				49° 52.41	128° 11.11		2212					by accident 1200m bottle
		1003	EN				49° 52.42	128° 11.11							to be # 23
18	LBP8	1055	BE	ROS		12	49° 48.58	128° 16.70							
		1131	BO				49° 48.55	128° 16.69							Lost connection to
		1213	EN				49° 48.55	128° 16.69							CTD @ 1176m on
															the upcast

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

Date Time PDT

This page is for any notes or observations

Sep 16 - 0904 - stopping up on DP1-B for recovery

- stopped close up app. ½ cable - heavy fog and in traffic channel.

- 0910 - diagnostic 5.116 - 3.000 = 2.116 5116 AR861 # 739

$$\begin{array}{r} 2.116 \\ \times\ 4.1 \\ \hline 2116 \\ 8464 \\ \hline 8.6756 \end{array}$$ volts

- 0915 - sent rng. 291 m
- 0916 - sent rel. rng = 295 m
  - sighted on surface app. 3/4 cable distant - quite close but this is required by the fog.

- recovered without incident - flat calm, thick fog.

- preparing 2 moorings for deployment
- ship relocates to OC1 mooring position during this time

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month	Year	Ship	Cruise ID

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
18	LG01		BE	ROS		14	49°20.54	126°35.03	51				TJ+DS	✓	CTD 443 removed
		2107	BO				.546	045		45	6 mab				CTD 506 installed for
		2108	EN				.564	057							event 14
18	LG02	2139	BE	ROS		15	49 18.697	126 38.131	100					✓	
		2143	BO				49 18.761	126 38.222		95	4 mab		TJ		
		2145	EN				49 18.772	126 38.305							
18	LG03	2230	BE	ROS		16	49 15.047	126 43.708	125		5 mab		TJ	✓	shallowed to 119
		2235	BO				.014	784		114					
		2236	EN				49 15.012	126° 43.790							
18	LG04	2320	BE	ROS		17	49 11.288	126 49.452	145				TJ	✓	
		2326	BO				49 11.227	126 49.451		140	5 mab				
		2329	EN				49 11.242	126 49.460							
19	LG05	0038	BE	ROS		18	49° 7.47	126° 55.23	270				SR	✓	
		0043	BO				49° 7.47	126° 55.22		265					
		0047	EN				49° 7.48	126° 55.18							
19	LG06	0137	BE	ROS		19	49° 3.54	127° 1.24	973				SR	✓	
		0157	BO				49° 3.56	127° 1.21		963					
		0214	EN				49° 3.52	127 1.22							

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: 06 March 2008

Date	Time PDT	
Sep. 16	1636	- deployed mooring (!!) OC1-A in 118.5 m water on sounder (with 3m) tide = 115.5 m datum at 50° 18.444' and 125° 17.925'
		- proceed to (*) DP1 for deployment. *
	1939	- deployed mooring DP1-C in 238 m water (on sounder) at 50° 18.255' 125° 25.346'.
		- head for Brook's Penn.
		- en route contacted I.O.S (Thomson + Perreault) and R/V T. Thompson to coordinate science crew change in Gold River

This page is for any notes or observations

(!!) NC1 mooring is relocated to Okisollo Channel + becomes OC1

(*) DPN1 (Thomson) DP1 (Stucchi) mooring identifiers have been confusing thus DPN1 was renamed DP2

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month	Year	Ship	Cruise ID

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
19	LG07	0305	BE	ROS		20	48° 59.44	127° 7.20	1775				SR	✓	
		0337	BO				48° 59.41	127° 7.15		1765					
		0410	EN				48° 59.42	127° 7.16							
19	LG08	0506	BE	ROS		21	48° 55.30	127° 13.38	2082				SR		
		0541	BO				48° 55.27	127° 13.39		2072					
		0615	EN				48° 55.28	127° 13.37							
21	EF02	18:01	BE	ROS		22	49° 5.015	125° 10.276	71.20		126-131	6	LP		New operator on winch
		18:03	BO				49° 5.026	125° 10.272		65					
		18:12	EN				49 5.028	125° 10.308							
21	EF03	18:32	BE	ROS		23	49 4.243	125° 9.902	121		132-139	8	LP		
		18:36	BO				49° 4.243	125° 9.401		112.0					
		18:45	EN				49° 4.243	125° 9.415							
21	EF04	19:44	BE	ROS		24	49° 3.118	125° 8.597	62		140-144	5	LP		
		19:52	BO				49° 3.124	125° 8.593		55					
		19:56	EN				49° 3.124	125° 8.590							
21	EF05	20:16	BE	ROS		25	49° 2.555	125° 9.175	201		145-155	11	JZ		
			BO				49° 2.549	125° 9.167		189					
			EN				49° 2.549	125° 9.152							

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: _____

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Version: 06 March 2008

Date Time PDT

This page is for any notes or observations

Sep 17 1507 - arrive at mooring site BP2-A and deploy after locating a suitable flat spot.
- the bathymetry is steep and rough.
- depth on sounder = 400 m at position: 50°02.707' and 127°55.453'.

1557 - start CTDs along LBP Line.

- further coordination of science crew change in Gold River.

- during final cast on LBP 8 the CTD stopped communicating ? Don't know why at this time.

- the probe was replaced with the back-up unit and the system became functional again.

- the problem is something within the 911 CTD itself and will have to be investigated later.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month | **Year** | **Ship** | **Cruise ID**

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
21	EF06		BE	ROS		26	491.760	125 9.188	149		156-164	9			
		2158	BO				491.751	125° 9.205		148					5mab
			EN				491.775	125 9.184							
21	E507	2121	BE	ROS		27	49°1.248	125°9.397	119		165-172	8			
		2126	BO				49°1.248	125°9.335							
		2135	EN				49°1.225	125°9.418							
21	EF08	2149	BE	ROS		28	49°0.665	125°10.231	87		173-179	7			
		2153	BO				49°0.667	125°10.225							
		2200	EN				49°0.660	125°10.256							
21	EF09	2217	BE	ROS		29	49°0.107	125°10.846	62		180-185	6			
		2220	BO				49°0.104	125°10.844		55	186-192	7			
		2226	EN				49°0.101	125°10.838							
21	EF10	2242	BE	ROS		30	48°59.949	125°11.240	100						
		2245	BO				48°59.845	125°11.234		90					
		2252	EN				48°59.821	125°11.221							

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Version: 06 March 2008

Date	Time PDT	
Sep. 18	- 0800	- en route to Estevan Point for deployment of mooring E01.
	-1326	- arrived on site E01-XX-2 for deployment mooring all set up on deck.
		- launched at position 49° 17.296' 126° 36.189' 102.5 m showing on sounder.
	-1335	- depart for nearshore end of LG Line for CTD's
		- ongoing we have been downloading and examining the returning instruments.
		- all have been giving reasonable data.
		- LR75 #8745 produced data but exhibited a major data drop out period, and problems in pressure + temp channels - indicative of flooding through pressure sensor port.
		- we opened it and indeed found extensive damage to electronics - the wonder is why it continued to work at all.?!
		- completed LG CTD Line and headed in to Gold River.
		- continued coordination of science crew change.

This page is for any notes or observations

Date	Time PDT	This page is for any notes or observations
Sep. 19	0730	- called after Lucius and he was on his way. - cellular coverage is not working - iridium was the way to go
	0830	- Lucius arrives with pick up truck + trailer (rental trailer) - he stayed over night in Campbell River, evening 18th, got an early start to meet ship, but went to wrong jetty thus short delay
	0930	- Scott, Ian, Isto and Shane leave ship.
		- we stay alongside to set up Neptune moorings
	1300	- depart Gold River jetty
		- the situation on the Thompson is: - JB is working - cable between JB + NODE suspect - NODE itself is suspect
	1330	- completed NC mooring deployment meeting - very successful. - further discussions during day conclude with Tully going to End Ridge + deploying
		- we dry test + wet test to 15m depth both systems - everything works both Sys #2 + Sys #3 tested good and in certified configuration. - See separate notes for detail.

Date Time (PDT)

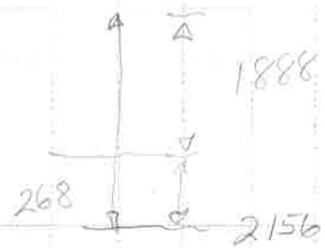
This page is for any notes or observations

Sep. 19. – evening – confirmed our departure with Thompson / Mairi Best.
– setup Sys #2 on deck until driven off deck by rain + dark
– buoys (large), anchor, instruments and line were flaked and secured for the night.

Sep. 20 0730 – arriving on site.

0815 – made contact with Thompson – arranged deployment procedure with Keith Tamboric.
– arranged small equipment transfer with boat.

0830 – completing set up on deck – add – foot ball floats
– final – set up items.



01045 – start.

1230 – lowering – Ropos tracking. 2156 m depth.

1240 – stopped at 100 m

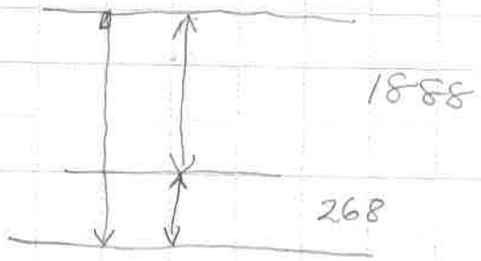
1245 – descending slowly 228 m. 242 269 – 486

– ROPOS requested we stop at 200 m a b so we'll stop *1680

1310 – passed halfway mark for lowering. 880 m

Date Time PDT

This page is for any notes or observations



Sep 20 1320 - 1129 m down to top of mooring.
- repeat ROPOS wants to stop 200 mab. = 1680 +8
- 1/2 point was 840 m 3/4 point = 1260 m

1327 - 1261 m app 3/4 way down
- ship moving app. 100 m to be closer on site.

1342 - 1685 - ≐200 mab* stopped
(*bottom of mooring). 1788

1344 - ROPOS has mooring on sonar.

1420 - ROPOS has visual on anchor.

1430 - 1787 on station lowered 100 m 1788
- start lowering 50 m more 1838 ?
ROPOS following down.

1435 - start lowering another 50 m + securing comp gear. 1888

1440 - lost contact to release acoustically - Ropos reported a thermocline layer that caused them problems as well

1450 - app. 2 m off bottom manouvering over station - I did make a few contacts to release instrument (1925 m. 1925 m.
but essentially turned over control to ROPOS who are in visual contact and can more reliably call the release.

1510 - ROPOS shut down systems + hydraulics.
- got one hit at 1927 m - sent release and got the correct responses
- mooring was dropped app 2-5m off bottom.
- ROPOS lost sight due to dust cloud from anchor impact
- ROPOS examines upper portion of mooring and it all looks good
- we are waiting

1625 - confirmed with Thompson / ROPOS - mooring is all in good order
- ROPOS has completed tasks
- they will plug in tonight or tomorrow
- we can not do anything more.
- we depart for Effingham Inlet eta 1100 Sep. 21

Date Time PDT

This page is for any notes or observations

Sep. 21 - 0730 en route into Effingham Inlet.

- packing up for off-loading.

- 1100 - arrive at EFF02 Effingham Inlet and commence CTD stations out bound until we run out of time and have to head home
- intend to tie up Sep. 22 0700 - ish and offload by 1200.

- app. 1605 - completed EFF10 and depart for I.O.S.

- packing up - vehicles are booked for Sep. 22.