

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2009-59

DATE:

From: Sep. 15, 2009 to: Sep. 25, 2009

VESSEL:

CCGS J.P. Tully

PROJECT(S):

La Perouse, Effingham Inlet, Georgia Strait
Deep Water, Aquaculture Discovery Passage,
Whale Monitoring,

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

WaterProperties.ca

Captain: Murray McGregor
 Second Officer: Duncan
 Fishing Master: n/a.
 First Officer: Rong
 Third Officer: Doug

Mission Participants / Agencies: O5D PBS

Scientific Personnel:		Chief Scientist:	
Name	Watch	Cabin	Name
			Tom Juhasz

Name	Watch	Cabin	Name	Watch	Cabin
Tom Lubarsz					
Cindy Wright					
David Spear					
Lucius Perreault					
Scott Rose					
Steve Romaine					
Josh Zoteman					

Second leg of Mission: _____

n/a.

Data logging computer:

Data acquisition program: _____

CTD deck unit make: _____ **model:** _____ **serial number:** _____

Primary CTD

Make: Sea-Bird model: 9 serial number: 0585

Primary temperature serial number: 4054

Primary conductivity serial number: 3321

Secondary temperature serial number: 4700

Secondary conductivity serial number: 1766

Transmissometer: Wetlabs Model: _____ s/n: 983DR

Fluorometer: Model SeaPoint Cable gain: 10x s/n: 2228 PS or NO pump? P

Oxygen sensor: 58E Model: 43 s/n: 1176 PS or NO pump?

PAR sensor: Biospherical Model: s/n: 4615

Other sensors: 2-24 P, S or NO pump?
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: _____
 Other sensors: _____
 s/n: _____
 P, S or NO pump? _____

Secondary CTD

Make: SBE model: 9 serial number: 0443

Primary temperature serial number: 2638

Primary conductivity serial number: 2128

Secondary temperature serial number: 2449

Secondary conductivity serial number: 2424

Transmissometer: _____ Model: _____ s/n: _____

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

Fluorometer Model: SBF Model: 43 s/n: 0997 P, S or NO pump?

Oxygen sensor: 02S s/n:
PAR sensor: Model:

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

Other sensors: _____

Other sensors: _____

s/n: _____

P, S or NO pump? _____

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

Other sensors: _____

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

Date Time PDT

This page is for any notes or observations

Sep. 16 0800 - 0900

- people begin to join ship. { Cindy, Scott, Lucius, Steve, Dave, Josh + Tom.
- loading completed Sep. 15 with some setup.
- always some last minute stuff.

- sailing time set at 0900, however Vector (Chandler cruise) require CTD system set up assistance.

0945

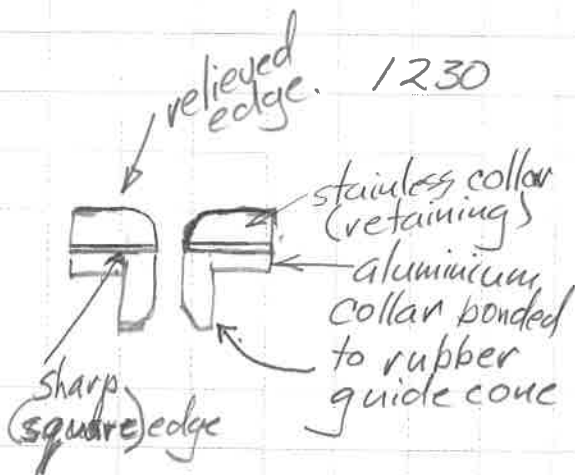
- we send Scott over to help Vector. - the problem is extensive.
- Scott still occupied on Vector.
- Tully sails to conduct operational training with stbd side station.
- both ship + science crew need familiarization.

1030-1130 - multiple launch and recovery attempts successfully.

1230

- new station very promising
- Scott rejoins Tully

- Rosette station testing + training continues.



NB: previous science crew noted that boat deck CTD which needs reterminating because top tips of helical coils are bent backward app. 1". As the PMI enters the guide cone (rubber) it snags, hits aluminium plate to which it is bonded then hits edge of stainless collar. Turns out stainless collar was installed upside down - relieved edge up! Our termination has been hitting the square edge!! Re installed turned over.

Date
Sep 16

Time PDT

This page is for any notes or observations

- cont'd.

- we will also wire whip the end of the helical rods after replacing them.

- CTD testing proceeded very well. Some notes:

- on one occasion, there was no slack left in the cable during deployment - the cable was loaded beyond normal actually lifting Rosette on angle.

- there is an apparent flat spot on the cable which has to be investigated - more to follow

- the control cabin has a high pitch hydraulic noise
- very annoying. possibly harmful to hearing.

- 1330 - head up Strait of Georgia for deployment of mooring
DPNI.

Date Time PDT

This page is for any notes or observations

Sep. 17 0730 - on station DPN1 for deployment of mooring
- setting up on deck

0948 - deployed DPN1-B in 151.4 m water. (not corrected for tide)
at position $49^{\circ}57.775$ $125^{\circ}08.751$

- completed another round of training for crew operating
stbd CTD Station.

- the wire whipping at the top of the termination helical rods
did not work - rods are still being bent back as they
pass the guide cone - should be changed to metal - brass
recommended

- the next attempt is a section of glass reinforced
tygon pipe split and put over helical rods then
twine whipped and taped.

1345 - boat + fire drill.

- CTD ops delayed by termination problems

- IO 1090ED *003 transponder found to be flooded when being
serviced for the Cape St. James Aural - now we have no spare.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept				Year 2009				Ship Tully				Cruise ID 2009-59			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	Sacandich	2137	BE	ROS		0001	40 39.335	123 30.475	182	175		-			
		2143	BO				40 39.305	123 30.449							
		2147	EN				40 39.294	123 30.448							
17	Sut Chan 2	1924	BE	ROS		0002	50 4.448	125 7.372	261	255	1-12	12			BOT 7 = 007a
		1933	BO				50 4.447	125 7.385							Spirit #7 pushed in
		1955	EN				50 4.450	125 7.375							* Problems with DO software see bit book
17	Hos Chan	2251	BE	ROS		0003	50 10.855	125 8.050	111	106			SR		Com problems see notes
		2255	BO				50 10.844	125 8.063							
		2257	EN				50 10.844	125 8.076							
18	Sut Chan 1	01.09	BE	ROS		0004	50 10.076	125 01.609	460	457			CD		✓
		1:20	BO				50 10.074	125 01.643							
		1:30	EN				50 10.072	125 01.740							
18	DePass	02.31	BE	ROS		0005	50 16.09	124 59.04	507	502			CD		✓
		02.42	BO				50 16.10	124 59.14							
		02.53	EN				50 16.10	124 59.108							

Date Time PDT

Sep. 17

This page is for any notes or observations

- Dario's positions have numerous errors - i.e. 2 stations same position
- Tully can not get to several to shallow and tight for big ship.
- stations miss positioned.
- new deck crew working at night will require Bosun to come on watch with them
- between termination problems + operational problems I'm not confident we will accomplish a lot tonight. We also have to pass through the narrows 0530 tide.

1605

- completed HosChan station.
- CTD program occasionally does not initialize Com1 (CTD deck unit). - resolved by disabling Com1 then restart ~~and connect~~ + enable Com1
- can also work without restart through device manager.
- the termination helical rod fix worked but will need monitoring and possibly maintenance.
- T/S started just before HosChan station
- we discover salinity bottles were not loaded.

* DO; we had some computer issues with 002's titration causing the programs to crash and reset - see black note book for details

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Month 9				Year 2009			Ship Tully				Cruise ID 2009-59				
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							Latitude	Longitude							
18	Ca-Chan	0348	BE	ROS		0006	50 20.348	125 7.049	536	530	13-28	16	SLP	✓	
		0401	BO				50 20.350	125 7.144							
		0424	EN				50 20.389	125 7.238							
18	DPZ	1136	BE	ROS	US	007	50°5.106	125°16.026	83	77	—	—	SR	✓	
		1138	BO				50°5.111	125°16.060							
		1140	EN				50°5.105	125 16.088							
18	PA1	2103	BE	ROS		0008	50 31.914	125 22.130	48	43			The other SR	✓	
		2106	BO				50 31.795	125 22.128							
		2107	EN				50 31.785	125 22.126							
18	PA2	2139	BE	ROS		0009	50 29.012	125 22.036	100	95	29-35	7	SR	✓	
		2144	BO				50 29.015	125 22.116							
		2152	EN				50 29.029	125 22.158							
18	FeArm1	2310	BE	ROS		0010	50 29.126	125 15.605	165	160					aborted -
		2316	BO				50 29.135	125 15.605							REDO
		2318	EN				50 29.140	125 15.622							

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Sep. 18 0730 - on station DP1-A mooring for deployment
- deployed in 240.1 m water at position $50^{\circ}18.248'$
 $125^{\circ}25.322'$

- we got to come up with better Argos + VHF mounts

1234 - deployed NCI-A in 260.3 m water at $50^{\circ}24.118'$
 $125^{\circ}19.885'$

1240 ish - head for PAI CTD to complete Aquaculture program

22:55 Fc Arm 1 had to abort the first attempt as the cable was ratty - needed to be rechecked - possible retermination? - nope - things must be ok
Restarted cast - overwrote old 0010.hex file

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Sept				2009				Tully				2009-59			
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							Latitude	Longitude							
19	FeArm 2	23:52	BE	ROS		0011	50 27.142	125 17.158	314				SK/CW	✓	
		23:57	BO				50 27.119	125 17.177		309					
		0002	EN				50 27.090	125 17.215							
19	NoChan	0102	BE	ROS		0012	50 22 180	125 21.170	212		36-46	11	SK/CW	✓	BOT 7 did not fire
		0108	BO				50 22 152	125 21 232		206					BOT 3 failed integrity
		0123	EN				50 22.031	125 21 479							new vent plug installed
19	OK Chan	0242	BE	ROS		0013	50 17 668	125 19 882	109				SK/LP	✓	
		0244	BO				50 17 666	125 19 880		105					
		0248	EN				50 17 668	125 19 880							
19	23	0337	BE	ROS		0014	50 15.778	125 23.093	246	241				✓	
		0344	BO				50 15.772	125 23.047							
		0347	EN				50 15.769	125 23.051							
19	ISDP	0835	BE	ROS		0015	50°20.340	125°27.090						✓	Cancelled due to very strong currents →
			BO				50°20.	125°27.							
			EN				50°20.	125°27							

- 1) Lanyards on BOT 7 were off set - will test fire on next cast
- 2) vent plug on BOT 3 was replaced

In DO log Nocher is cited as
Cast 010 - this is a mistake

→ BOTS 3 and 7 fired for test only (0013).

The current was causing the wire angle under the ship + 40° aft.
Stopped the cast @ 115m, tried again but decided to abort.

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							Latitude	Longitude							
19	121	1054	BE	ROS		0016	50° 22.562	125° 35.474	262	256	47-58	12	SR	✓	
		1101	BO				50 22.505	125° 35.478							
		1120	EN				50 22.338	125° 35.418							
22	LG00	2:08	BE	ROS		0017	49 21.74	126 34 045	30					✓	com port issue
		2:10	BO				49 21.74	126 34 045		25					
		2:11	EN				49 21.743	126 34 0.44							
22	LG01	0245	BE			0018	49 20.44	126 35.086	54					✓	
		0246	BO				49 20.46	126 35.100		49					
		0247	EN				49 20.459	126 35.105							
22	LG02	0319	BE			0019	49 18.686	126 38.140	99	94	59-65	7	SR	✓	
		0324	BO				49 18.694	126 38.152							
		0332	EN				49 18.692	126 38.156							

Cast Type:
BOT = Bottle cast, no CTD
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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
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Notes:

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

Date Time PDT

Sep. 19 0730

This page is for any notes or observations

→ to Cape St. James CSJ1-B mooring

- en route out of Johnstone Strait - fog, calm
- CTD's completed during night with significant modification of program due to tides and traffic.

- also the Tully is the wrong ship to do this job

- some stations are in locations Tully cannot go to.

- this program will require more thorough planning and different logistic base.

- yesterday I commented the flagging sheave at the base of the CTD LARS is unsafe - it is loose on the bushing and has nearly 1" of play at the sheave perimeter.

- the basic problem is that the cable groove is the correct diameter at the cable tread but is not deep enough to force the sheave to follow the cable fleet angle as it travels side to side on the drum.

- this results in side loading on the sheave which in turn causes the plastic to deform on the bushing

* - the sheave wobbles on the bushing.

- the engineers will disassemble the flagging sheave re-machine the central hole and insert a new bushing.

- this is only a temporary fix - the real answer is to replace all sheaves which bearing hub aluminium sheaves and make the flag-sheave assembly also bearing supported.

* also groove sheave deeper

Cast 0017 Com port
I dropped out
restarted system

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Month <u>Sept</u>				Year <u>2009</u>			Ship <u>Tully</u>			Cruise ID <u>2009-59</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							
22	L603	0414	BE	ROS		0020	49 15.000	126 43.681	123	118	51-		SLP	✓	
		0420	BO				49 15.020	126 43.697							
		0422	EN				49 15.023	126 43.706							
22	L604	0504	BE	ROS		0021	49 11.288	126 49.352	145	140	66-74	9	SLP	✓	
		0510	BO				49 11.306	126 49.366							
		0520	EN				49 11.317	126 49.361							
22	L605	0608	BE	ROS		0022	49 7.385	126 55.296	276	270					
		0616	BO				49 7.391	126 55.289							
		0620	EN				49 7.390	126 55.290							
22	L606	0715	BE	ROS		0023	49° 3.43	127° 1.09	970	960	75-91	17	SR		Bottle #7 didn't fire. Will replace trip mech
		0744	BO				49° 3.42	127° 1.19							
		0823	EN				49° 3.38	127° 1.25							
22	L607	0916	BE	ROS		0024	48° 59.37	127° 7.12	1778	1771			SR	✓	Replaced trip mech
		0954	BO				48° 59.35	127° 7.19							
			EN				48° 59.32	127° 7.33							

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Date Time PDT

This page is for any notes or observations

Sep. 19 $\approx$ 1100

- just north of Malcolm Island - calm - fog has slowed us down.
- we have no internet on ship which means we cannot connect to email. Ship email is available but not internet
- we will spend app. $\frac{1}{2}$ hour in Hardy Bay to make wireless connection - both personal and work related pressures are concerning people.
- I have intended to recover the subsurface buoy from E03-HH (2001 deployment) on Cape Sutil beach. It has been reported 3 times. The Captain has arranged for the Tannu to recover this and it is on board Tannu even as I write.

DAILY SCIENCE LOG

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Month <u>Sept</u>		Year <u>2009</u>		Ship <u>Tully</u>		Cruise ID <u>2009-59</u>										Page <u>6</u> of <u> </u>	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments		
							Latitude	Longitude									
23	EFF16	0813	BE	ROS		0025	48° 47.66	125° 16.02	110	105			SR	✓	Strong currents		
		0817	BO				48° 47.66	125° 15.98									
		0820	EN				48° 47.66	125° 15.96									
23	EFF15	0905	BE	ROS		0026	48° 51.35	125° 15.08	98	92			SR	✓			
		0908	BO				48° 51.34	125° 15.07									
		0910	EN				48° 51.34	125° 15.07									
23	EFF14	0942	BE	ROS		0027	48° 53.98	125° 13.05	109	104			SR	✓			
		0946	BO				48° 53.98	125° 13.04									
		0949	EN				48° 53.97	125° 13.03									
23	EFF13	1024	BE	ROS		0028	48° 56.55	125° 10.88	104	99			SR	✓	Fired bottle #1 @ 50m to test Cindy W's horizontal bottle		
		1028	BO				48° 56.55	125° 10.80									
		1031	EN				48° 56.55	125° 10.74									
23	EFF12	1053	BE	ROS	US	0029	48° 57.98	125° 10.45	95	90	92-99	7	SR	✓			
		1055	BO				48° 57.98	125° 10.45									
		1103	EN				48° 58.00	125° 10.45									

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Notes:

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Date Time PDT

This page is for any notes or observations

Sep. 20 0730 - on station CSJ1-B for recovery.

- range 120, 121 - drifted off. 242, 245

- waiting for engine room to be ready.

- range. 107 105 nearly on top. 102 range.

- moving off to release. 132 m.

0800 - sent B534 at 600 ft away - no response.

- moved closer

- repeated several
more attempts
without success

- re contacted at 144 m range
sent release command got "rec'd + exec'd" -

0803 - sighted on surface. - VHF works, Argo works

- preparing for re-deployment - a lot of jury-rigging
to fit Aural into PATC frame

- we have to build some Aural frames.

1246 - launched CSJ1-C. in 100 m water
at position $52^{\circ} 02.017$ and $131^{\circ} 12.054'$

- gate building

- head for Brooke's to deploy Argo float.

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Month <u>Sept</u>				Year <u>2005</u>				Ship <u>Tully</u>				Cruise ID <u>2005-39</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	EFF01	1903	BE	ROS		0030	49 5.566	125 11.723	32	28	100-103	4	SL	/	
		1907	BO				49 5.566	125 11.722							
		1911	EN				49 5.567	125 11.720							
23	EFF02	1937	BE	ROS		0031	49 5.010	125 10.338	70	65	104-109	6	SL	/	
		1943	BO				49 4.998	125 10.342							
		1951	EN				49 4.991	125 10.336							
23	EFF03	2011	BE	ROS		0032	49 4.276	125 9.410	119	118	110-116	7	SL	/	
		2017	BO				49 4.279	125 9.404							
		2026	EN				49 4.282	125 9.400							
23	EFF04	2050	BE	ROS		0033	49 3.142	125 8.560	56	50	117-121	5	SL	/	
		2054	BO				49 3.140	125 8.554							
		2059	EN				49 3.140	125 8.551							

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Sep. 21

0730

- gale much reduced 10-15 knot winds + dropping.
- arrive on Argo buoy deployment position (nominal) and fine tune it to find 2000+ m. - app. 3.5 nm steam to get outside of 2000m contour.

- removed bag + stoppers and filled boot by standing unit in a bucket of water (seawater loop)

- buoy is 4519.

0809-0814

- deployed in 2074 m water.

- lowered off stern

- sank at 0814 in app. 5 min.

49° 55.8' N 128° 35.2' W

- heading for recovery EOI

emailed to Howard + Jill

1645

- under way to EOI-VV for recovery ETA 1700

- LG Line tonight

- checked on repaired flagging sheave

- new bushing was machined into it and this time a keyway was added unlike the similar repair during the previous cruise.

- took picture of the extensive grooving of both sides of the sheave produced as it wobbled between supporting pillow blocks.

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							Latitude	Longitude							
23	EFF05	2113	BE	ROS		0034	49 2.567	125 9.138	204	193	122-132	11	82	✓	Com 4 = GPS Com 5 = modem interface on Deck unit Com 1 = SBE INTERFACE
		2121	BO				49 2.570	125 9.166							
		2132	EN				49 2.569	125 9.168							
24	EFF06	0100	BE	ROS		0035	49 1.805	125 9.190	157						Computer Crash - see notes →
		0105	BO				49 1.805	125 9.196		151	133-141	9	82CW		
		0117	EN				49 1.806	125 9.190							
24	EFF07	0136	BE	ROS		0036	49 1.247	125 9.406	120		142-148	7	82CW	✓	
		0142	BO				49 1.25	125 9.416		117					
		0147	EN				49 1.253	125 9.425							
24	EFF08	0206	BE	ROS		0037	49 0.66	125 10.21	87		149-154	6	82CW	✓	
		0208	BO				49 0.655	125 10.207		82					
		0215	EN				49 0.656	125 10.208							

Cast Type:

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ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

=

Bottle Firing Method:

US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

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

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

Date Time PDT

This page is for any notes or observations

Sep. 21 1700 EOI-VV
- approaching mooring - flat calm - clear
- ranges 988, 941, 828, 568, 526, 419, 371, 278, 170
→ 140, 132, 143
stopping

1710 - 1730 - quick supper - range 144, 149
- waiting for engine room

1737 - sent range 174 sent release got "rec'd + exc'd"

1738 - sighted on surface.

≈ 1800 - on deck washing up
- head for in-shore end LG Line

192.168.2.66
1118

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of

Month <u>Sept</u>				Year <u>2009</u>			Ship <u>Tully</u>			Cruise ID <u>2009-52</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	EFF09	0245	BE	ROS		0038	49 0.108	125 10.840	61		155-159	5	SR/LW	✓	
		0246	BO				49 0.108	125 10.846		56.6					
		0252	EN				49 0.106	125 10.870							
24	EFF10	0308	BE	ROS		0039	48 59.840	125 11.196	100	95	160-166	7	SR/LP	✓	CTD computer is hanging on start of rec. Takes a couple of tries to get it to start
		0313	BO				48 59.840	125 11.195							
		0321	EN				48 59.840	125 11.196							
24	EFF11	0338	BE	ROS		0040	48 59.117	125 11.058	84	79	167-172	6	SR/LP	✓	
		0341	BO				48 59.104	125 11.040							
		0349	EN				48 59.081	125 11.010							
24	LLP1	0600	BE	ROS		0041	48 50.40	125 27.737	95	94			SR/LP	✓	
		0604	BO				48 50.396	125 27.748							
		0606	EN				48 50.352	125 27.750							
24	LLP3	0649	BE	ROS		0042	48 46.938	125 34.256	135	130			SR/LP	✓	
		0656	BO				48 46.909	125 34.272							
		0659	EN				48 46.896	125 34.279							

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:

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- 0834 - deployed mooring E01-WW in 101 m water at position $49^{\circ}17.323'$ $126^{\circ}36.190'$
- head for recovery of mooring A1 then plan to go into Effingham to work through coming bad weather.

1405 - 565 range sent release got "rec'd + exc'd." ¹¹
1407 - sighted on surface

1810 - arrived launch point for Argo buoy.
1815 - launched #4520 in 2323.8m at 47°59.99'N 126°30.026'W
- plugs + bag removed moving at 1kn buoy pre loaded with
loop water.
- buoy sank immediately. Notified Howard by email.
1820 - head for Eppingham Inlet.

Date Time PDT

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Sep. 23 0730 - inside Effingham heading for mooring recovery EF04-E-2

0745 - small boat launched

0802 - streaming through passage.
- ranges 167, 152, 149, 152

- move away for release. ↑ closest we have crossed over it.

0804 - sent release code got positive response @ 237m
0805 - sighted on surface

0830 - all on board washing down

Diag. horizontal post deployment
5.2.2.6.
5.2.2.1.

- Yay! our ADCP data looks good.
- ditto AI instruments and other EF04 instruments.

1109

- deployed EF04-F in 95-98m depth at
position $49^{\circ}03.897'$ $125^{\circ}09.091'$
- unfortunately there was a mistake made in that the
position selected should have been the recovery position but
in fact the mooring was dropped on a older mark still on the
electronic chart. This old mark was shallower up the slope of the
sill

Date Time PDT

This page is for any notes or observations

Sep. 23 - cont'd. - we head to EFF01 to start CTDs after lunch

- we have rigged Van Doren bottle onto Rosette at same height of the transmissometer and such that tripping bottle 1 also trips the Van Doren. - got pictures.

app. 2000 - completed Effingham stations - delayed by computer problems in CTD acquisition
Computer Crash, head for LC Line stations over night.

We had the computer giving us 'com port 1' errors, which would happen about every ~10 casts. The solution was to disable com 1, reboot, enable com 1 and then start Seasave again. Then at EFF05 this solution failed to fix the problem. We spent several hours troubleshooting the CTD computer, the deck unit, and everything inbetween to find the answer.

- com port was in use by another application (couldn't figure out what)
- suspect some new software might be at fault.
- could be a motherboard problem
-

Backup CTD computer installed, but using USB → com port. deck unit response time is slower and hangs when starting acquisition about 1 out of 4 times, but recovery does not involve a reboot. Good thing only 2 days left for this Field season

Date Time PDT

This page is for any notes or observations

Sep. 23, 0730 - on station A1 mooring for deployment.
- diminishing gale - rough seas app 2-3 m white caps - not nice.

0838 - deployed A1-WW in 505m (12kHz) 502m water (18kHz)

at position $48^{\circ}31.996'$ $126^{\circ}12.418'$

- marginal situation but all worked well.
- to find right depth mooring is app. 1 cable to north of last few deployments which have progressively gotten deeper.
- head for SBT-A recovery.

1330 - arrive at SBT-A - conditions improving but there is a big swell
- ranging on mooring - no replies.
- directly over station received 1 hit at 110m - but only 1 hit.
- manoeuvred around and got several hits 110-180 but never two or three in row. - ship manoeuvring for swell + current
- 114 $\rightarrow$ 105 $\rightarrow$ 97 drifting over using dunking
drifted past 100-125

1410 - sent release code at 127m got "rec'd + execut'd."
- sighted on surface app 70m off stern.

VHF OK ✓ Argos OK ✓
Transponder OK ✓.

Date

Time PDT

This page is for any notes or observations

Sep. 23

1539

Deployed mooring SBI-B in 73 m at
 $48^{\circ} 30.988' + 124^{\circ} 56.077'$ (tide at Renton = +3m)
 $73 - 3 = 70$ m datum.

Head for I.O.S. - packing up as we go.