

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2009-40

DATE:

From: May 14

to:

May 25 2009

VESSEL:

CCGS J.P. Tully

PROJECT(S):

La Perouse, Effingham, Georgia Strait.

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

WaterProperties.ca

Date Time PDT

This page is for any notes or observations

- May 15 0800
- loading completed - set up underway.
 - crane repairs completed.
 - aft deck camera " "
- 1300
- sail: - Tom, Dave, Melissa, Ian, Scott, Steve, Lucius on board.
 - Jane + Hugh also join to complete test cast.
- 1341
- complete O₂ Intercomparison 1.0 S / 51.0 Oxygen systems
O₂ cast at station 55. see notes for sampling detail
 - New O₂ System: Standard & Blank values are not "remembered" by the program. Program was freezing on every 2nd sample. Had to use task mgr. to close program.
 - Old O₂ System: High DO values cause titration curve to be flat at the start. This causes error messages to pop up. End point can not always be reached. Some samples need 2 titrations.
 - tried to set up T/S logger - no luck! - Trouble shooting conclusions are:
 - computer ok
 - SBE box ok
 - SBE 21 not responding
 - Smart term - seems to be working
 - the Interconnect box may have problem
 - cable ok
 - NEMA ok
 - rings through
 - has power to SBE 21
 - certainly the SBE 21 itself has problems.
 - completing central (thalweg) station of Georgia Strait CTD's on way north + CFF (copra?) Bougos Also CTD's near (Kluhm) at Iniannessen AMP2 moorings

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month		Year		Ship		Cruise ID									
MAY		2009		TULLY		2009-40									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
15	55		BE	ROS	US*	1									See notes → for
		2041	BO				48 39.25	123 30.36	181	176	1-18	18		No	Comments
			EN												
16	46	0101	BE	ROS		2									
			BO				48°51.400	123 10.880	180	170	19-28				
			EN				51.391	123 10.960							Sample 28 omitted
16	42	02:56	BE	ROS		3	49° 1.787	123° 26.204	321	315	29-42	14	SR MH LP	✓	
		03:07	BO				49° 1.774	123° 26.156							
		03:26	EN				49° 1.706	123° 26.084							
16	39	0430	BE	ROS		4	49 9.877	123° 32.824	375	365	43-56	14	SR MH LP	✓	
		0436	BO				49 9.956	123 32.754							
		0455	EN				49 10.219	123 32.570							
16	27	0619	BE	ROS		5	49 19.110	123 48.118	350	345		0	SR MH LP	—	
		0625	BO				49 19.166	123 48.162							
		0630	EN				49 19.202	123 48.197							→ shot bottles for the night, hot water on pylon

Cast Type:

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

USW = Sea Water Loop

MOR = Mooring
 NET = Plankton Net Haul
 DRF = Drifter

— =

Bottle Firing Method:

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

Notes:

Time Code:

BE = Beginning Time of Cast
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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

SS - oxygen methods test & CTD test

6 bottles closed at each of 3 depths, samples drawn 12 using 10S procedure, 12 using S10 closing method: Rosette comes up to depth, stop 30s

up 3m, down 6m, up 3m, wait 30s
repeat 5 times

Date Time PDT

May 16 0750

- on station DPN1-A for recovery

- stopped above mooring - seen on sounder!

- sent 6412 FR1+2 ON. - range 155, 156, 159. → 166

- sending range cmd - not working - early interrupts even though sounders are off

- move off to release. - ended up too far. moving closer.

0820

- 370 m range using enable cmd.

- sent Win + Release. rec'd 377 m range. got confirmation "rec'd + exec'd"

0822

- sighted on surface complete

NB: sending range command always resulted in early interrupt.

* both RCM4 rotors missing

- VHF, antenna knocked off during recovery but it worked.

- pinger + argos working.

* our deck unit #81 must be at fault or there was another 8kHz sound source around that was filtered better on command response.

* - checked release on recovery and it functioned well including range response.

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>5</u>			Year <u>2009</u>			Ship <u>Tully</u>			Cruise ID <u>2009-40</u>						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	DPN1	1648	BE	CTD		6	49°57.776	125°8.687	152		—				3 mab
		1654	BO				49°57.794	125°8.723		150					
		1657	EN				49°57.816	125°8.732							
16	14	1806	BE	ROS		7	49°53.027	124°59.581	316		57-69	13	DS		8 mab
		1816	BO				49 53.072	124°59.620		310					Winch counter out
		1832	EN				49 53.051	124 59.822							remote read-out not working
16	SOGN	1915	BE	ROS		8	49 49.873	124 52.414	339	334	70-82	13	SR/LP MHT	✓	
		1927	BO				49 49.824	124 52.451							
		1943	EN				49 49.724	124 52.483							DO Flask 605 broken
16	12	2216	BE	ROS		9	49 43.603	124 40.823	355	350	83-96	14		✓	→ sec notes
		2225	BO				49 43.595	124 40.810							
		2245	EN				49 43.595	124 40.824							
17	9	2352	BE	ROS		10	49 35.503	124 38.301	189		97-106	10	SR	✓	6 mab
		2357	BO				49 35.508	124 38.312							
		0008	EN				49 35.503	124 38.307							
17	6	0015	BE	ROS		11	49 30.626	124 27.769	193		107-117	11	SR	✓	8 mab
		0019	BO				49 30.631	124 27.762							
		0030	EN				49 30.635	124 27.759							

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May 16 0948 - completed CTD on mooring site + head south doing George's Strait stations, and Aquaculture Bongo's and CTD's at Johannessen AMP2 moorings.

Bottle 1 → latch starting to stick → need to fix soon

Before event #9 - swapped deck mAs (424 → 509) due to remote display problem

app. 1300-1415 - tested new hydro winch (boat deck) at site SOGN
- there was one serious problem with winch operation related spooling and synchronization of drum + electronic level wind sensors. When the sensors become asynchronous the winch automatically stops, requiring manual override to make operational again. - Problem was unresolved and repeat test set up for deeper water.

1430-ish resume CTD / Bongo stations.

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Ocean Sciences Division, Institute of Ocean Sciences

Month 5				Year 2009			Ship Tully			Cruise ID 2009-40					
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							
17	3		BO	NET		12				250					Bongo
17	3	0333	BE	ROS		13	49 26.579	124 20.228	324	315	118-131	14	SN/LP/MA	✓	
		0341	BO				49 26.615	124 20.230							
		0359	EN				49 26.569	124 20.234							
17	2	0503	BE	ROS		14	49 24.103	124 9.330	280	274	132-144			—	
		0509	BO				49 24.126	124 9.359							
		0525	EN				49 24.050	124 9.322							
17	CPF1-	0603	BE	ROS		15	49 22.140	124 4.984	249						
		0609	BO				49 22.117	124 4.938							
		0614	EN				49 22.145	124 4.968							
17	CPF2	0642	BO	NET		16	49 22.189	124 5.041	255	240					Bongo
17	GO1	0815	BO	NET		17	49 14.973	123 45.007	400	250					Bongo
17	GO1	0854	BE	CTD		18	49 14.973	123 45.008	405						Data comp crashed
		0902	BO	ROS			49 14.970	123 45.005							at start
		0908	EN				49 14.963	123 45.006							
18	LBO1	0056	BE	CTD		19	48 40.400	124 59.502	35	31			SR		
		0059	BO	ROS			48 40.393	124 59.503							
		0101	EN				48 40.399	124 59.504							

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May 17 0800

- Georgia Strait stations (CTD + Bongo) completed over night to GOI (Bongo)
- (at app. 0200 hrs PDT)
- since then we have been steaming to deploy mooring SBI (J. Ford) on Swiftsure Bank
- in morning we are just off Victoria ETA for SBI is app. 1600 hrs.
- during May 16 day in addition to sampling we addressed:
 - reprog. + service of winch payout counter on CTD winch #17026
 - repaired depth repeater on SBE system.
 - tested hydro (new) winch. see separate notes.

1621

- deployed mooring SBI - A $48^{\circ}30.512'N$ $124^{\circ}53.201'W$.
81.0 m water with +1.5 m tide at Tofino

- calm

- some fog

NB: 4-5 Humpback Whales were cavorting - breaching within site at mooring deployment.

1630

- depart for nearshore end of LB CTD line
- reterminated cable on CTD winch 17027 removing app. 20m of cable suspected of being excessively tensioned over a small diameter.
see separate reterm. log.

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Month <u>5</u>				Year <u>2009</u>			Ship <u>Tully</u>		Cruise ID <u>2009-40</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							
18	LBO2	0134		ROS		20	48 39.040	125° 2.315	57	50	145-149				6 mab
		0137					48 39.025	125 2.287							
		0142					48 39.016	125 2.293							
18	LBO3	0227		CTD ROS		21	48° 37.322	125° 05.506	93	85					8.5 mab
		0230					48° 37.325	125° 05.509							
		0232					48° 37.321	125° 05.518							
18	LBO4	0311	BE	ROS		22	48 35.671	125 8.671	114	105	150-156?	7	ST/LP/MT	/	
		0315	BO				48 35.675	125 8.692							
		0323	EN				48 35.658	125 8.642							
	LBO5	0356	BE	ROS		23	48 33.997	125 11.984	103	97	—				
		0400	BO				48 34.032	125 11.958							
		0402	EN				48 34.031	125 11.951							
18	LBO6	0437	BE	ROS		24	48 32.176	125 15.480	116	109	157-164				
		0441	BO				48 32.150	125 15.458							
		0449	EN				48 32.177	125 15.455							
18	LBO7	0552	BE	ROS		25	48 28.650	125 22.115	160	150	165-173				
		0556	BO				48 28.642	125 22.057							
		0606	EN				48 28.614	125 22.060							

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Version: 06 March 2008

These last few stations are not labelled correctly on the CTD computer -
off by 1 #?

Date Time PDT

May 18 0730 - on station A1 for recovery - moving Rosette.

0740 - range, 526, 525, 525.

0743 - moving off to recover, 539 range underway, 547

0803 - 590 m range, 5117 diagnostic 617 m range

0805 - sent Arm 617 m + "rec'd." + "exec'd" sent release got confirmation.

0807 - sighted on surface.

0808 - all buoys on surface.

- all on board without incident - lost one rotor on recovery tangle.

0920 - washed down heading for Ettingham mooring

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							Latitude	Longitude							
18	LB08	0657	BE	ROS		26	48°25.268	125°28.626	140	133			SR		
		0701	BO				48°25.265	125°28.645							
		0704	EN				48°25.270	125°28.636							
18	LB09	0754	BE	ROS		27	48°22.061	125°34.734	151	141	174-182		SR		
		0758	BO				48°21.998	125°34.700							
			EN				48°21.986	125°34.720							
18	LB10	0859	BE	ROS		28	48°18.544	125°41.322	153	145			SR		
		0902	BO				48°18.534	125°41.342							
		0905	EN				48°18.538	125°41.360							
18	LB11	0957	BE			29	48°15.196	125°47.738	206		183-194		SR		
		1003	BO				48°15.233	125°47.674							
		1019	EN				48°15.199	125°47.707							
18	EFF01		BE			30	49°5.543	125°11.670	35	30	195-198				→
			BO				49°5.536	125°11.668							
			EN				49°5.526	125°11.668							
19	EFF02	00:23	BE	ROS		31	49°5.002	125°10.322			199-204				
		:26	BO				49°4.998	125°10.316							
		:33	EN				49°4.996	125°10.313							

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14.30 Monday 18 May - Mounted new PBR / Optode CTD
on rosette for testing on future casts

This page is for any notes or observations

Date Time PDT

May 18

1540

- approaching mooring. 330 → 179 m ranges.
- steaming slowly over mooring without stopping
- $\frac{1}{2}$ cable = 149 m range. 139, 137, 138, 142

diagnostic = 5132.

↑ mooring abeam passing over to
off to one side.

- range 200m. and further - stopped giving confirmation - too far.
- moving back closer - no luck with hull transducer - ship wants to stay away.

1558

- ranged using dunking transducer range = 202
- sent release range = 201 got "rec'd + exec'd"

1600

- sighted on surface.

1637

- all on board + cleaned
- start Effingham CTDs + O₂s

app. 2000.

- contacted shore party arriving in Bamfield.

Cindy Wright, Tara Ivanchevko,
Steve Catvert, Shane Reiser,
Hugh Maclean.

} overnight at Biological
Station.

DAILY SCIENCE LOG

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Month 5				Year 2009			Ship Tully				Cruise ID 2009-40				
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							Latitude	Longitude							
19	EFF03	0106	BE	ROS		32	49° 4.252	125° 9.392	121	115	205-212	8	SR	✓	6 mab
		0109	BO				49° 4.256	125° 9.384							
		0118	EN				49° 4.235	125° 9.334							
19	EFF04	0143	BE	ROS		33	49° 3.115	125° 8.543			213-217		SR		
		0146	BO				49° 3.103	125° 8.538						✓	5 mab
		0151	EN				49° 3.078	125° 8.538							
19	EFF05	0212	BE	ROS		34	49° 2.536	125° 9.186	204	195	218-228		SR	✓	
		0215	BO				49° 2.522	125° 9.202							
		0227	EN				49° 2.496	125° 9.268							
19	EFF06	0255	BE	ROS		35	49° 1.762	125° 9.187			229-237		SR/LP/Hm		
		0259	BO				49° 1.758	125° 9.182							
		0308	EN				49° 1.748	125° 9.184							
19	EFF07	0325	BE	ROS		36	49° 1.242	125° 9.404	120	115	238-244	7		✓	Dupl. O2 test this station
		0328	BO				49° 1.229	125° 9.412							
		0336	EN				49° 1.152	125° 9.430							
19	EFF08	0352	BE	ROS		37	49° 0.660	125° 10.246	88	83	245-250	6		✓	
		0355	BO				49° 0.649	125° 10.254							
		0401	EN				49° 0.628	125° 10.259							

Date Time PDT

May 19

0700

- standing of entrance to Effingham Inlet

0730

- launch small boat to pick up shore party

- Tully heads to EF04 for deployment

- mooring setup en route

≈

0915

- small boat returns with Cindy, Tara, Steve, Hugh and Shane.
(they begin to set up for coring)

0956

- launched mooring EF04-E in 112.5 m water (less tide)
at position $49^{\circ}03.856'$ $125^{\circ}09.101'$

- proceed with coring and associated CTD/Rosette(s) and sampling.

≈

1530

- Coring shore party depart by small boat

- Tully still in inner basin completing tests for ADCP performance.
see following notes.

- we got trained to sample UBC samples for a cast in Barkley Sound on our way to the west coast

*

- our sounder has failed - the bridge made some alteration in the system resulting in our sounder being disconnected from the GPT (General Purpose Transceiver)

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							Latitude	Longitude							
19	EFF09	0418	BE	ROS		38	49 01.04	125 10.838	64	58	251-255	5	82/LP/mt	/	
		0421	BO				49 0.101	125 10.841							
		0426	EN				49 0.085	125 10.842							
19	EFF10	0440	BE	ROS		39	48 59.832	125 11.215	103	97	256-262	7		No	
		0443	BO				48 59.821	125 11.207							
		0450	EN				48 59.801	125 11.207							
19	EFF11	0508	BE	ROS		40	48 59.118	125 11.048	86	81	263-268	6		/	
		0512	BO				48 59.108	125 11.012							
		0517	EN				48 59.089	125 10.910							
19	EFF12	0559	BE	ROS		41	48 58.004	125 10.454	94	89	269-275	7		/	
		0601	BO				48 58.006	125 10.478							
		0603	EN				48 58.026	125 10.516							
19	EFF13	0632	BE	ROS		42	48 56.482	125 10.663	104	99	276-282	7		/	
		0636	BO				48 56.486	125 10.643							
		0643	EN				48 56.467	125 10.579							

Date Time PDT

This page is for any notes or observations

- May 19. -1300 -1700
- looked at EF04-D data (ADCP) and concluded we have same poor data as last deployment. Concluded not enough scatterers.*
 - tested ADCP hung downward looking from ship 10m below surface (1st test - we changed WBO to WBI - got better data. for 30min.)
 - (2nd test) - we confirmed WBO is worse.
 - decided to recover EF04-E change WBO to WBI and 1/2 hour sampling leaving ping rate and bin size the same.*
- Recovery EF04-E
- 1750
- range 218, sent 16B4 + 1655 got 217m "rec'd + exec'd"
- 1751
- sighted on surface.
 - recovered without incident
 - ADCP reprogrammed as above *
- 1852
- redeployed EF04-E-2. 49° 03.861' 109m on sounder, 125° 09.106'
 - data from short deployment of EF04-E shows it is bad as before due to too few scatterers.
 - we also double checked depth of ADCP at this location i.e. 103m.

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19	EFF14	0714	BE	ROS		43	48° 54.010	125° 12.942	108	100	283-285	7	SR		I started back up
		0718	BO				48° 54.013	125° 12.942							to the surface w/o
		0727	EN				48° 53.935	125° 12.959							firing bot 1. Stopped
19	EFF03	1730	BE	ROS		44	49° 04.25	125° 09.39	116		290-301	12			the winch @ 90m and went
		1732	BO				49° 04.25	125° 09.39		114					back
		1749	EN				49° 04.25	125° 09.40							particle study cast
19	EFF03	1925		CORE #1		45	49° 04.24	125° 09.431							Good core
		2005		CORE #2		46	49° 04.28	125° 09.402							NO core
20	EFF15	0409	BE	ROS		47	48° 51.385	125° 14.933	92	87	302-308	7			
		0412	BO				48° 51.384	125° 14.958							
		0420	EN				48° 51.420	125° 14.923							Forgot to trip #7
20	LC01	0539		ROS		48	48° 50.438	125° 27.697	92	87					
		0542					48° 50.448	125° 27.641							
		0543					48° 50.444	125° 27.614							

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WaterProperties.ca
Version: 06 March 2008

Strd

EFF03 113m

BOT 1 = BOT

BOT 2 = BOT-5

BOT 3 = BOT-

BOT 4 = BOT

BOT-5 = 2

100m =

75

50

30

20

10

surf.

This page is for any notes or observations

Date Time PDT

May 20 0737

- on station E01 for recovery.

- ranging 123, 124 m

- drifting off 'as deck prep'd for recovery. 152, 153

0743

- range 177, then lost contact. app 1/2 cable away.

0750

- range 431 2 cables sent release - using dunking transducer.
got 444 m "rec'd + exec'd"

- sighted on surface.

- argos working VHF working - antenna broken during recovery.

0850

- all washed - recovered without incident.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>05</u>				Year <u>2009</u>				Ship <u>Tully</u>				Cruise ID <u>2009-40</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
20	LC02	06:18	BE	ROS		49	48° 48.682	125° 30.920	106	100	309-315	7	MH	☒	
			BO				48°	125°			Computer Crash				
			EN				48°	125°			Don't let Melissa near the computer again!				
<u>20</u>	<u>LC02</u>	<u>06:37</u>	<u>BE</u>	<u>ROS</u>		<u>49</u>	<u>48° 48.620</u>	<u>125° 30.960</u>	<u>105</u>	<u>100</u>	<u>309-315</u>	<u>7</u>	<u>MH SR</u>	☒	
		<u>06:40</u>	<u>BO</u>				<u>48° 48.620</u>	<u>125° 30.962</u>							
		<u>06:51</u>	<u>EN</u>				<u>48° 48.624</u>	<u>125° 30.972</u>							
<u>20</u>	<u>LC03</u>	<u>07:25</u>	<u>BE</u>	<u>ROS</u>		<u>50</u>	<u>48° 46.945</u>	<u>125° 34.226</u>	<u>138</u>	<u>128</u>			<u>SR IB</u>	☒	
		<u>07:27</u>	<u>BO</u>				<u>48° 46.933</u>	<u>125° 34.235</u>							
		<u>07:31</u>	<u>EN</u>				<u>48° 46.939</u>	<u>125° 34.235</u>							
<u>20</u>	<u>LC04</u>	<u>08:23</u>	<u>BE</u>	<u>ROS</u>		<u>51</u>	<u>48° 43.434</u>	<u>125° 40.837</u>	<u>167</u>	<u>160</u>			<u>SR IB</u>	☒	
		<u>08:28</u>	<u>BO</u>				<u>48° 43.457</u>	<u>125° 40.824</u>							
		<u>08:32</u>	<u>EN</u>				<u>48° 43.462</u>	<u>125° 40.795</u>							
<u>21</u>	<u>LG08</u>	<u>00:56</u>	<u>BE</u>			<u>52</u>	<u>48° 55.284</u>	<u>127° 13.301</u>	<u>2052</u>	<u>2000</u>			<u>SR/IB</u>		
		<u>01:25</u>	<u>BO</u>				<u>48° 55.294</u>	<u>127° 13.297</u>							
		<u>01:48</u>	<u>EN</u>				<u>48° 55.284</u>	<u>127° 13.303</u>							
<u>21</u>	<u>LG07</u>	<u>03:42</u>	<u>BE</u>	<u>LOS</u>		<u>53</u>	<u>48° 59.395</u>	<u>127° 7.180</u>	<u>1750</u>	<u>1740</u>	<u>316-336</u>		<u>SR/LP/MH</u>	☒	
		<u>03:49</u>	<u>BO</u>				<u>48° 59.333</u>	<u>127° 7.266</u>							
		<u>04:35</u>	<u>EN</u>				<u>48° 59.635</u>	<u>127° 6.962</u>							

Cast Type:

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

USW = Sea Water Loop
 MOR = Mooring
 NET = Plankton Net Haul
 DRF = Drifter
 =

Bottle Firing Method:

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

Notes:

Time Code:

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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

May 20 1120 - launched E01-VV in 97m + 4.5m draft less tide.
@ position 49° 17.296' 126° 36.144' app 100m water

- 1200
- tested stbd-side CTD/Rosette station.
 - attached I/O transponder #003 BEFG CDFG CDF to Rosette in case of loss.
 - latched / unlatched several times to evaluate latching function.
 - hoisted Rosette - checked clearances.
 - applied brakes
 - tensioned cable - note: cable touches pivot point of latching assembly
 - completed deployment - lower app. 30m
 - completed recovery - landed Rosette.
 - filmed on video throughout.
 - attempted second launch however brake lever bearing broke.
 - there is no spare on board so ship is fabricating replacement bushing.
 - removed transponder and tests ended until brake control fixed.
 - steam out LG line to start CTD's at offshore end.

- 1530
- stop in 400m water to test hydro winch - lower weight
 - checked and corrected synchronization of level wind sensors - spooling well.
 - trouble shoot control issue (sudden unpredictable stops)
 - narrowed problem down to remote joy-stick. - local joystick works well
 - joy-sticks to be swapped to define problem.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month		Year		Ship		Cruise ID		Page 10 of 10							
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
21	LG06	0532	BE	ROS		54	49 3.475	127 1.181	952	945		-	SR/EP/ MH	/	
		0546	BO				49 3.494	127 1.162							
		0559	EN				49 3.486	127 1.177							
21	LG05	0645	BE	ROS		55	49 7.369	126 55.262	271	268	337-348	12	SR/IB	/	
		0653	BO				49 7.363	126 55.280							
		0709	EN				49 7.392	126 55.302							
21	LG04	0757	BE	ROS		56	49° 11.291	126° 49.420	147	141			SR/IB	✓	
		0801	BO				49° 11.302	126° 49.418							
		0803	EN				49° 11.310	126° 49.414							
21	LG03	0850	BE	ROS		57	49° 15.018	126° 43.730	122	118			SR/IB	✓	
		0854	BO				49° 15.019	126° 43.740							
		0857	EN				49° 15.024	126° 43.711							
21	LE09	2154	BE	CTD		58	48° 35.982	126° 43.998	1443	1430			TS/DS/LP	/	
		2215	BO			5	48° 35.991	126 43.991							
		2231	EN				48° 35.990	126° 43.986							

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Code:

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recovered.

735 ✓ 738 ✓ 149 ✓ 730 ✓ SBI
E01 AI APN EF04

731 ✓ 733 — 734 ✓ 736 ✓

Date Time PDT out.

This page is for any notes or observations

May 20 1415 - continue out-bound LG line for CTD's
- intend to try hydro winch in deep water if joy stick swap works.

May 21 0700 - on station AI mooring for deployment.
- prep. mooring on deck.

1142 - launched AI-VV in 504m + 4.5 draft less tide. depth.
at position $48^{\circ} 31.777'$ and $126^{\circ} 12.232'$

- steam to outer end LE line for CTD's

*

May 21 app. 2400 - LE Line CTD's done.
- steam back. to I.O.S.

* intended to test stbd. side CTD station again but CTD winch failed. :
- mechanical brake not being applied automatically.
- Scontrol module and cable installed why?
- local control was tested by engineers and did not function well after ward either payed out or in in both settings.
- Phil Lobb contacted about these problems.

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Month <u>5</u>				Year <u>2009</u>				Ship <u>Tully</u>				Cruise ID <u>2009-40</u>			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
21	LE08	2330	BE	ROS		59	48°40.295	126°38.003	1307	1300	349-368	21	SR 115	✓	Miss labeled on header as LE09
		2346	BO				48°40.366	126°37.943							Transmissometer blipped
		0019	EN				48°40.732	126°37.524							to almost twice
22	LE07	0111	BE	ROS		60	48°44.207	126°31.974	524	516					✓
		0121	BO				48°44.178	126°31.926							
			EN				48°44.174	126°31.921							
22	LE06	0222	BE	ROS		61	48°48.476	126°26.269			369-379				
		0227	BO				48°48.466	126°26.240							
		0239	EN				48°48.472	126°26.156							
22	LE05	0339	BE	ROS		62	48°52.793	126°20.375	154	145	-		SR LDI MH	✓	
		0344	BO				48°52.787	126°20.317							
		0346	EN				48°52.794	126°20.186							
22	LE04	0431	BE	ROS		63	48°56.455	126°14.590	117	107	380-386	7		✓	
		0434	BO				48°56.485	126°14.599							
		0442	EN				48°56.470	126°14.550							
22	LE03	0527	BE	ROS		64	49°0.481	126°10.573	77	70	-			✓	
		0530	BO				49°0.485	126°10.546							
		0531	EN				49°0.480	126°10.552							

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- intended to complete 4 Juan de Fuca stations but this was cancelled because we want to get in in time to offload after supper.
- we pack up en route - only mooring stuff comes off.
- we have meeting re new hydro + CTD station
 - this crew should develop operation protocol.
 - new station will be used by J. Romaine on John Ford cruise.
- T/S still not working: communication is established but system crashes and provides incorrect numbers
 - could be sampling interval too high.
 - could be con file differences.
- we fixed the sounder by resetting (reboot) not only the computer (done previously) but also the transceiver box in the transponder compartment.

May 21 - 1700 - dock at I.O.S.

- offload after supper - clear of ship app. 1900.

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966

0705

0.847

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