

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2011-44

DATE:

From: May 14, 2011

to:

May 24, 2011

VESSEL:

CCGS J.P. Tully

PROJECT(S):

Aquaculture, Discovery Passage, SARH,
La Prouse, Effingham Inlet.

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

WaterProperties.ca

Cruise 2011-44

This page is for any notes or observations.

Date Time PDI 2011

- May 14 0830
 - consult with ship (Captain + Bosun) - loading + sailing this evening on schedule. - we get ship 1200 hrs.
 - ROPDs offloading going well.
- 1200 - OSD crew: Tom, Dave, Lucius, Scott, Steve, Cindy, Chelsea, Roger - join ship + commence loading.
- loading + setting up all day
- 1820 - sailing for comparison cast at VPS station
cast designated VPS1
- 1910 - cast completed and sampled for O₂ + Nuts.
- there is no further time to complete.
- we head out for DP2 mooring recovery.

Station = VPS1
48°39.04' / 123°28.49'

Date Time (PDT)

May 15 0735

This page is for any notes or observations

Stopping up at DP2-A for recovery

- ranged several times. through hull transducer without luck

- bridge reports seeing it on the sonar.

- no response having tried several combinations of deck units + transducers. - including dragging transducer

- listening to pinger was completed but response was inconclusive because several small fish boats were in close proximity and likely had sounders operating

- one strong return was present but the r.p. rate was higher than expected.

- ultimately mooring was seen on site on sonar several times and in optimistic scenario the pinger was heard + the release was not responding

- I decide to leave mooring in place for later recovery

- release code was not sent
- recovery by dragging was not attempted.

- new location was selected to deploy DP2-B - 101 m depression

0941 - deployed DP2-B at 49° 59.480' 125° 12.268' in 96 m water.
3 cables to north.
up Discovery Passage.

Date Time (PDT)

This page is for any notes or observations

May 15 0945 - leave DP2-B and head for Seymour. - going for recovery of OC1 and DP1

1215 - approaching OC1-A getting ranges 486, 350-ish, 155, 160.
- stopped over mooring 164

1220 - moved off to position for release
1225 - 224 m release sent got range 235 got rec'd + exc'd.

1325 - sighted on surface
- head for DP1-C for recovery.

1330 - arrive on site - release responding to ranges as we go
1331 - stopped over station ranges 295 + 297

- move off 1 1/2 - 1 cable for release
1334 - app. / cable off range = 367.
- sent release code range = 385 got rec'd + exc'd.

1338 - sighted on surface but only the bottom float came up.
WH300 #356 & rivy frame 5537 #2588 missing.
- the evidence points to corrosion of the wire approx. 50 m above the bottom float.

DAILY SCIENCE LOG Ocean Sciences Division, Institute of Ocean Sciences Page 1 of 1

Month		Year		Ship		Cruise ID								
May		2011		Tideley		2011-44								
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	VP51	0147	BE	R05	HS	1	48° 39.84	123° 28.49	78m	75m	1-6	6	SR	NO SBE 585
			B0				48° 39.04	123° 28.49						
			EN				48° 39.04	123° 28.49						
16	LO	0033	BE	R05		2	50° 29.06	125° 35.070	15p	145	7-15	9	SR	✓
		0040	B0				50° 29.602	125° 35.064						
		0050	EN				50° 28.545	125° 35.060						
16	ChChau	0140	BE	R05		3	50° 25.114	125° 41.010	248	235	16-28	13	SR	✓
		0147	B0				50° 25.138	125° 41.026						
		0201	EN				50° 25.163	125° 40.950						
16	PA1	0721	BE	R05		4	50° 31.81	125° 22.07	47	40	29-33	5	SR	✓
		0722	B0				50° 31.80	125° 22.08						
		0728	EN				50° 31.80	125° 22.00						
16	PA2	0756	BE			5	50° 29.04	125° 22.04	105	95	34-41	8	SR	✓
		0758	B0				50° 29.04	125° 22.04						
		0808	EN				50° 29.07	125° 22.00						

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Notes:

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Date

Time (PDT)

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DP1 mooring continued - it is unusual that the drifting package was not sighted and recovered in the heavy traffic area.

* - data from WTLR 150kHz shows upper part lost Feb. 6, 2011 app. 1600 UTC
May 15 app. 1730 - we commenced the CTD survey of stations accessible north of Seymour

- all stations except #121 were completed
- there was a SAR request at app. 2400 hrs. interrupting CTD work
 - the SAR involved a med-evac of an ill fish farm operator to Campbell River.
- CTDs completed without significant problem thereafter.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID			Page <u> </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							
16	FEARM1	0859	BE	R05	US	6	50 29.14	125 15.56	166		41-49	9	SR		Trawl not working
		0912	BO				56 29.13	125 15.55		157					Restart Cast
		0923	EN				50 29.09	125 15.55							@ Scum Count 16600
16	FEARM2	0953	BE	R05	US	7	50 27.14	125 17.16	313	303	50-62		SR		
		0959	BO				50 27.14	125 17.16							
		1020	EN				50 27.12	125 17.15							
16	NoChen	1110	BE	R05	US	8	50 22.25	125 21.12	209		63-73		SR		
		1114	BO				50 22.25	125 21.13		200					
		1133	EN				50 22.27	125 21.20							
16	JSDP	1213	BE	R05		9	50 20.24	125 27.48	330		74-86		SR		
		1221	BO				50 20.23	125 27.68		320					
		1242	EN				50 20.21	125 27.67							
18	LBP1	2330	BE	R05		10	50 4.787	127 52.703	51	45					Swamp SBE550
		2349	BO				50 4.762	127 52.732							
		2351	EN				50 4.744	127 52.744							
19	LBP2	0833	BE	R05		11	50 3.995	127 54.172	98	94	87-93				
		0840	BO				50 3.971	127 54.211							
		0048	EN				50 3.940	127 54.218							

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Produced by the Water Properties Group, IOS

I didn't turn the pumps on, but we had tripped 2 bottles, so we returned to the surface and started over @ scan count 16600. Sorry for the hassle Genevieve

Bottle 1 tripped @ 320 db, but no 300m bottle was on the sheet because we were expecting only 300 m of water at this site. Tom's station sheet said it was in 300 m.

7385

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Ship			Cruise ID						
4			2011						2011-44						
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							Latitude	Longitude							
14	LB P3	01023	BE	nos		12	50 3.178	127 55.345	167	165			Steve Cuddy	/	
		0130	BO				50 3.121	127 55.330							
		0133	EN				50 3.052	127 55.352							
14	LB P4	0155	BE	nos		13	50 1.360	127 58.058	1150	1140	94-110	17	"	/	
		0229	BO				50 1.684	127 58.526							
		0303	EN				50 0.573	128 0.002							
14	LB P5	0332	BE	nos		14	50 0.035	127 59.536	1275	1260				/	
		0350	BO				49 59.944	128 0.260							
		0419	EN				50 0.036	128 0.226							
14	LB P6	0504	BE	nos		15	49 56.244	128 5.447	792		111-125	15	"	/	
		0521	BO				49 56.230	128 5.536							
		0547	EN				49 56.192	128 5.728							
	LB P7														
14	LB P7	0636	BE	nos		16	49 52.387	128 11.204	2188		111-125		"	/	
		0721	BO				49 52.412	128 11.28		2150					
		0804	EN				49 52.55	128 11.54							

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Date Time (PDT)

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May 16 0700 - we are on station OC1 for deployment of mooring OC1-B
in the same configuration

0924 - launched OC1-B in 116 m depth at
- 50° 18.437' 125° 17.935'
- clear + calm

- prepared mooring CC1-A
1255 - deployed CC1-A at 50° 26.8995' in 141 m depth
125° 25.5678'

1305 - head out for Cape St. James. - steaming app. 22 hrs.
- servicing instruments + trouble shooting systems.

May 17
0800 - still steaming to Cape St. James.
- ETA to CST1-D 1400 hrs.

1300 - completed boat + fire drill en route.

1419 - approaching CST1-D - no conclusive ranges app. 1 nm away

1429 - stopping over mooring

1440 - ranges 151-154-169 -

1444 - ranges 295-296 sent release got rec'd + executed - launch

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year			Ship			Cruise ID						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
19	LB08	0850	BE	R03	US	17	49 48.59	128 16.79	2068		126-147	22	SR		
		0940	BO				49 48.61	128 16.78							
		1036	EN				49 48.57	128 16.84		2055					
19	LG-01	2333	BE	R05		18	49 20.467	126 35.003	53	48	148-152	5	Steward Crutney		
		2342	BO				49 20.527	126 35.024							
		2347	EN				49 20.537	126 35.024							
20	LG-02	0037	BE	R05		19	49 18.707	126 38.092	100	94		—			
		0042	BO				49 18.757	126 38.066							
		0044	EN				49 18.724	126 38.072							
20	LG-03	0122	BE	R05		20	49 15.004	126 43.616	124	115	153-155	7			
		0128	BO				49 15.010	126 43.642							
		0136	EN				49 14.578	126 43.744							
20	LG-04	0215	BE	R05		21	49 11.296	126 49.354	144	130		—			
		0221	BO				49 11.333	126 49.396							
		0224	EN				49 11.333	126 49.414							

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Version: 16 April 2010

Date Time PDT

May 17 1510 - mooring all onboard - Argo worked, VHF worked, Transponder (converted) 312

however NB transponder replies to XPRD command but does not provide a range.

ie. - the release command enabled transpond but not completely

1510 - 1710 - steamed to and service light of Cape St. James ODA5 buoy.

- steam to Triangle Island app. 11 hours travel for a night deployment of TI1-A mooring.
- prepare mooring on deck in transit.

May 18 0408 - deployed TI1-A in 148m water.
50°44'87" 129°10.565'

- head for Brooks Peninsula moorings ETA 1000-ish.

1020 - on station BP1-A for recovery.

- mooring seen on sonar ranges 117-119.
- move off to release, ranges 165 sent release got rec'd + executed
- sighted on surface.
- mooring on board without problems - washing down

1023
1024
1050

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month 5		Year 2011		Ship Tully		Cruise ID 2011-44									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
20	LG05	0300	BE	ROS		22	49 7.410	126 55.224	271	268	160-171	12		/	
		0315	BO				49 7.397	126 55.285							
		0331	EN				49 7.376	126 55.271							
20	LG06	0415	BE	ROS		23	49 3.505	127 1.145	956	950				/	
		0431	BO				49 3.504	127 1.186							
		0453	EN				49 3.553	127 1.182							
20	LG07	0500	BE	ROS		24	CANCEL	127 1.182							
20	PS	0717		ROS		24	48 41.48	127 10.03	2087	10	? 172, 173	2			
21	EFF01	0421	BE	ROS		25	49 5.553	125 11.042	38	32	179-177	4	Spore carry	/	
		0424	BO				49 5.532	125 11.044							
		0428	EN				49 5.522	125 11.024							

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Date Time (PDT)
May 18 - 1050

- heading for BP2-A for recovery

This page is for any notes or observations

1052

- ranges 421, 422, 423 → 420 → 418

1056

- move off app 1 cable to release.

- 1/2 cable off 445 m range

- sent release range 467m got rec'd + executed.

1059

- sighted on surface 400m over 3 minutes rise rate.

1123

- all on board without incident

NB: winch 589 is not

- could not lift the weight of 1545 float app. 1000 lbs. performing up to spec.

NB: the CTD cable on the boatdeck which

requires lubrication

- evidence of material loss present
i.e. gpps in awar wires appearing.

2-5m bottles stripped
for Cindy Wright

1428

- launched BP2-B in 399m depth in position 50° 02.717' and 127° 55.459'

1616

- launched BP1-B in 114m depth in position 50° 03.634' and 127° 53.919'
NB: - fouled release hook during launch resulted in deployment in depth 9m greater than designed.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month 5

Year 2011

Ship T-119

Cruise ID 2011-44

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	EFF2	0451	BE	ROS		26	49 5.016	125 10.343	71	66	178-183	6	Steve Curry	/	
		0456	BO				49 5.008	125 10.325							
		0502	EN				49 4.996	125 10.312							
22	EFF3	0524	BE	ROS		27	49 4.282	125 9.418	121	115	184-190	7		/	Wink wire is very rusty -
		0527	BO				49 4.258	125 9.354							
		0535	EN				49 4.228	125 9.359							comes off,
23	EFF4	0558	BE	ROS		28	49 3.115	125 8.562	60	52	191-195	5		/	turns deployment
		0607	BO				49 3.101	125 8.546							
		0608	EN				49 3.088	125 8.528							
24	EFF5	0623	BE	ROS		29	49 2.535	125 9.133	145	195	196-206	11		/	
		0636	BO				49 2.537	125 9.155							
		0644	EN				49 2.527	125 9.165							
25	EFF6	0708	BE	ROS	US	30	49 1.78	125 9.20	150		207-215	9			
		0712	BO				49 1.78	125 9.18		151					
		0722	EN				49 1.76	125 9.16							

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Date Time (PDT)

May 19 1045

- arrive on station EO1-XX-2 for recovery
- ranges 131-130-125 right on top + seen on sonar.

1047

- moving off for release
- range 177 - 1/2 cable away.

1049.

- 219m range - sent release got rec'd + not executed
- sighted on surface.

- clean up + service prep. for re-deployment.

Diagnostic on AR861 731 = 5.1, 5.6, horizontal.

1603

- deployed mooring EO1-Y4 at 49° 17.303' 126° 36.203'
in 102 m water depth.

- proceed to LG line CTDs starting at near shore end.

- we intend to complete a cast for filtered water as requested
by Sophie Johannessen at P5 app 1 1/2 hr steam to the
south west of LG line.

- completed - have 5 x 1L samples from 5m depth.
filtered.

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							Latitude	Longitude							
21	EFF7	0742	BE	ROS		31	49° 1.24	125° 9.38	120		246-223	3	SECS	✓	
		0745	BO				49° 1.23	125° 9.39							
		0754	EN				49° 1.23	125° 9.40							
21	EFF8	0815	BE	ROS		32	49° 0.66	125° 10.19	89		244-229	6	SECS	✓	
		0819	BO				49° 0.65	125° 10.20		82					
		0825	EN				49° 0.65	125° 10.24							
21	EFF9	0841	BE	ROS		33	49° 0.10	125° 10.83	66		230-234	5			
		0843	BO				49° 0.10	125° 10.83		60					
		0847	EN				49° 0.10	125° 10.84							
21	EFF10	0904	BE	ROS		34	48° 59.84	125° 11.23	103		235-241	7		✓	
		0908	BO				48° 59.84	125° 11.23		96					
		0915	EN				48° 59.85	125° 11.23							
21	EFF11	0930	BE			35	48° 59.12	125° 11.10	90		242-247	6		✓	
		0934	BO				48° 59.13	125° 11.11		82					
		0940	EN				48° 59.15	125° 11.10							

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Date Time PDT

This page is for any notes or observations

May 20 0700 - arrive on station A1-XX for recovery.

0735 - after breakfast directly over mooring. - mooring seen on sonar
- ranges 526 - 528 m.

0743 - move off to release. - problem in engine room delaying release
- range 554 m. sent release got red + executed.
- range during rise 310 m.

0834 - diagnostics during rise 5085 vertical
- all on board washing down and preparing for redeployment on site.

- the stopper chain was applied incorrectly and the mooring line was lost and the floating mooring had to be captured again
- service mooring on site - preparations underway

1301 - launched mooring A1-Y1 in 507 m (on sonar) depth
at position ~~48°~~ 31.796' 126° 12.249'
- ideal conditions

1310 - depart for Effingham Inlet to recover EFO4-G mooring and complete EFF CTD stations.

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Month		Year		Ship		Cruise ID		Page							
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
21	EFF-12	10:03	SE	ROS		36	48° 57.97	125° 10.51	96	84	243-254	7	CS SE	✓	
		10:06	80				48° 57.98	125° 10.53							
		10:15	EN				48° 57.99	125° 10.55							
21	EFF-13	10:34	SE	ROS		37	48° 56.47	128° 10.73	106		255-261	7	CS SE	✓	
		10:57	80				48° 56.48	128° 10.72							
		10:45	EN				48° 56.48	125° 10.72							

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Version: 16 April 2010

Date Time (PDT)

This page is for any notes or observations

May 20 1905

- passing over mooring ^{multiple} ranges 277m → 153m → 320m.
good contact as we passed.

1908

- as we stopped to turn. range 390 m
sent release code got read + executed but a nonsense range
- almost immediately it was sighted on the surface 7813m
astern of ship.

1930

- all on board - washing down
- mooring components - especially stainless steel was completely coated with a black sulphide deposit. It appeared very like a commercial plating finish with small crusty deposits scattered about the smooth plating. The coating comes off with vigorous abrasion such as using a brillo pad. I suspect a fresh water bath with light acid may also remove the layer

1950

- wash-down completed

- Captain suspends unilaterally the start of CTD stations until 2100 hrs in order to align ship to good satellite reception for a Canucks hockey game. I discussed this with the Captain and received his assurance that the ship will go to the head of the inlet in the dark and that the CTD stations will be done overnight.
In my opinion this is unprofessional behaviour but the 1 hour lost is not worth generating bad feelings for the rest of the cruise

Date Time PDT

This page is for any notes or observations

May 21 0730 - on station EFO4 for deployment of mooring EFO4-H.

- preparing on deck
- final programming of ADCP

NB: - all Effingham CTDs were completed - the last one taken at 0334Z

0838 - deployed mooring EFO4-H in 11m water. on sounder at position $49^{\circ} 03.865'$ $125^{\circ} 09.108'$

0845 - head for SBI mooring of recovery and redeployment.

1250 - approaching SBI-C app. 1.1nm off - attempting to transpond while standing at 10 knots - no luck.

- slowed down to stop on mooring got ranges 286, 267 $\rightarrow$ 204 $\rightarrow$ 162

1305 - sent release code - range 146 got rec'd + executed

- recovered without problem and prepared for redeployment

1450 - deployed SBI-D at $48^{\circ} 30.979'$ $124^{\circ} 56.100'$

Date Time (PDT)

This page is for any notes or observations

May 22 0730 - en route to DP2-A for recovery

1131 - arrive on site DP2-A - stopped on position as we mooring on sounder
- no responses to ranges approaching the site or stopped over it.

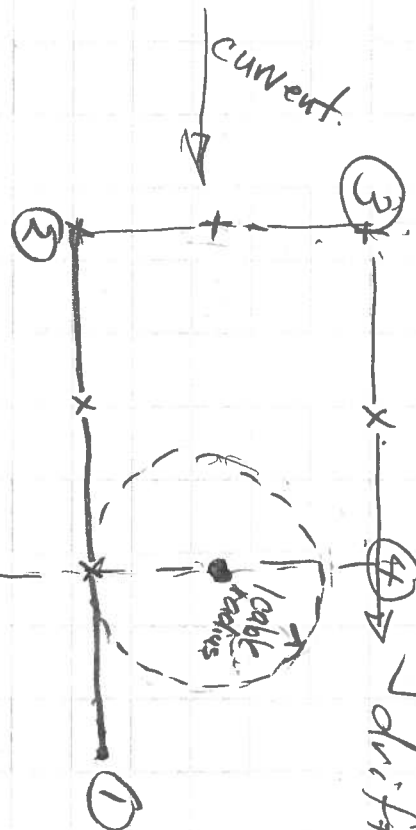
- checked pinger and it is working.
- we have drifted off - moving back to site to try dunking transducer as we drift over site.
1205 - stopped transducer in, ranging - no response - sent multiple release tried alternate codes as well without luck.

1219 - repeating operation using hull transducer.
- second pass using hull transducer - no success after multiple release command for straight release + release with pinger.
- setting up for drag.

Date Time PDI

May 22 1234

- discussed drag with Cap. + Mate. (ist)



NB: ① DP2-B was deployed only 3 cables to NNE and we have to avoid catching it in the drag.

③ during course of 3 drags there were multiple attempts to acoustically command the mooring - no luck

③ Bridge VHF-DP turned on to Chan F.

1400 - completed 1st drag - substantial loads on wire but no success recovering mooring.

- set up for second attempt in a tighter radius

1504 - completed second drag without success NB: second drag was centered on the end-point of 1st drag

1515 - check mooring was still in place using sounder - perhaps it was moved

1527 - mooring still on site - setup for another attempt - 3rd drag

1630 - 3rd drag ended without success

- we head for 1.0.5.

Date Time (PDT)

May 22 - drag continued

- 1523
- checked if mooring had been moved
 - sonar shows mooring is still in place
 - setting up for our more drag before we have to leave

1630-ish - the 3rd drag was also unsuccessful.

- moved over the mooring and determined it was still on station and had not been cut free but missed on the surface.
- mooring still there

1630-ish - we head for 1.0.5, dismantling drag on route

- pack on the way home

May 23 0700 - tied up and depart from ship - offloading was not allowed

- we brought the flat on the jetty - crew suggested they will offload deck gear (science stuff) once the fueling ends

May 24 0800 - we offload and clear of ship by 1100 hrs.