

DAILY LOG BOOK

MISSION
NUMBER

2007-14

DATE:

From: 19 JUNE

to: 3 JULY 2007

VESSEL:

JOHN P TULLY

PROJECT:

LINE Z

INSTITUTE OF OCEAN SCIENCES
OCEAN SCIENCES AND PRODUCTIVITY DIVISION
SIDNEY, BC, CANADA

WATCH A 0800-1600, 2000-2400
WATCH B 0000-0500, 1600-2000

Captain:	BILL NOON	First Officer:	BOB BENNETT
Second Officer:	SHANE LOVEACE	Third Officer:	ERIK A

Mission Participants / Agencies: TOS CWS

Scientific Personnel: MARIE ROBERT CABINAWATZ

Name	Watch	Cabin	Name	Watch	Cabin
AKASH SASTRI	B	B			
VALERIE FORDLAND	B	C			
MARTY DAVELAAR	B	D			
WENDY RICHARDSON	-	E			
DOUG VELLAND	A	F			
DOUG MOORE	A	G			
YIMING LUO	B	H			
MICHAEL BENTLEY	-	UPS			

Second leg of Mission: Party Chief:

[illegible]

Data logging computer:

Data acquisition program: SAVE 5.37M
CTD deck unit make: SSI model: 4 plus serial number: 0424

Primary CTD

Make: Seabird model: 9-pls serial number: 06P20878-0530

Primary temperature serial number: 2968

Primary conductivity serial number: 1766

Secondary temperature serial number: 2374

Secondary conductivity serial number: 1766

Transmissometer: *Chickasaw* Model: *95302*
s/n: *95302*

Fluorometer: Model Sea 2015 Cable gain: 10X s/n: 2845 P, S or NO pump?

Oxygen sensor: SEARCHED Model: 58643 s/n: 1117 P, S or NO pump? NO

PAR sensor:	Model:	s/n:

Other sensors: Altimeter Barometer s/n: 1252 P, S or NO pump?

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

Fluorometer: Model _____ s/n: _____
Cable gain: _____

Oxygen sensor: _____
Model: _____
s/n: _____

PAR sensor:	Model:	s/n
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Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: s/n: _____

Other sensors:	s/n:

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

Rosette Setup:

Number of bottles: _____
Manufacturer: _____
Volume of Bottles (litres): _____

Winches:

1. Make: <u>Hammer</u>	Model: _____	Serial #: <u>17027</u>	used for: <u>CTD/ROS</u>
2. Make: <u>"</u>	Model: _____	Serial #: <u>17026</u>	used for: <u>MULTIMET</u>
3. Make: <u>H&R</u>	Model: _____	Serial #: <u>589</u>	used for: <u>BOTTLES</u>

Comments on performance during cruise: _____

Salinometer:

Make: _____ Model: _____ Serial #: _____
Comments on performance during cruise: _____

Oxygen Kit #

Comments on performance of kit and chemicals: _____

Thermosalinograph System:

Program: SEA SAVE Version: 5-37A
Sampling interval (seconds): 30 seconds
Fluorometer sensor serial number: wetlabs WJ535-713P

Comments on performance during cruise: _____

ADCP Setup:

Computer time zone: _____ User Exits: Name: _____ Exit Points: _____
Sampling interval (seconds): _____ Name: _____ Exit Points: _____
Bin Length (2^x): _____ Name: _____ Exit Points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____

Comments: _____

CTD Test Cast Information

Test Cast at IOS Jetty? (optional) yes ☐ no ☐

Comments: (i.e. how did everything work??) _____

Test cast in Saanich Inlet? (recommended) yes ☐ no ☐

If no, give reason: _____

Comments: (i.e. how did everything work??) _____

CTD pressure reading on deck (db): 0.44
(Should be 0.0 db ± 0.5)

Pumps working? yes ☐ no ☐
(i.e.. Was the red LED display on the deck unit 0011 and not still 0010?)

Secondary Temp- Primary Temp: _____
(Average from the Mixed Region)

Secondary Salinity- Primary Salinity: _____
(Average from the Mixed Region)

Additional Comments: _____

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>JUNE</i>				Year <i>2007</i>			Ship <i>JOHN P. TULLY</i>				Cruise ID <i>2007-14</i> <i>P1</i>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
20	LOOP 1	2045	BE	USW	—	—	55° 09.88	135° 31.96	2487	—	LOOP 1	—	Marie	—	
21	LOOP 2	0036	LOOP BE	USW	—	—	55° 27.85	136° 35.036	2847	—	LOOP 2	—	Valeur		
21													Haily		Eyiming
21	EDDY 1	0749	BE	ROS	US	1	56 0.050	138 30 086	2939	2005	1-19	19	VF AS YL MD	✓	Winch went past 150 ON
		0823	BO				55 59.989	138 30 040							UPCAST, SO WENT BACK
		913	EN				55 59.972	138 30 028							DOWN TO SAMPLE
21	EDDY 1	0913	BE	BONGO		2	55° 59.97'	138° 30.03'	2939	250	—	—			BONGO
		0945	EN				56° 00.698	138° 30.266							
21	EDDY 2	1253	BE	BONGO		3	56 30.042	138 36.9207	3182	250	—	—			BONGO
		1305	EN				56 30 1668	138 36.6566							
21	EDDY 2	1320	BE	ROS		4	56 29.946	138 37.012	3183	2005	20	1	VF AS YL MD		
		1354	BO				56 30 076	138 37 075							
		1427	EN				56 30 094	138 37 234							
21	EDDY 3	1807	BE	ROS		5	57 4.918	138 44.904	3108					✓	Winch spooling problems
		1848	BO			1	57 4.964	138 45.03		2005	21	1			5 m bottle
		1922	EN				57 4.925	138 45.166							lots of floating
21	EDDY 3	1933	BE	Net		6	57° 04.95	138° 45.17	3109						Seaweed
		1939	BO				57° 04.96	138° 45.14		250					Bongo
		1944					57° 04.98	138° 45.19							

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Month <u>JUNE</u>				Year <u>2007</u>			Ship <u>J.P. TULLY</u>				Cruise ID <u>2007-14 P.2</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments	
21	EDDY 4	2338	Be	Net		7	57 29 9115	139 34 9701	3289	250	-	-	VF AS YL MD		Bongo	
		2344	Bo				57 29 923	139 34 9537								
		2348	EN				57 29 9256	139 34 9450								
22	EDDY 4	0004	Be	ROS	US	8	57 29 911	139 34 968	3291	2005	22	1	VF AS YL MD	✓	Smeter sample	
		0028	Bo				57 29 917	139 35 041								
		0058	EN				57 29 915	139 34 973								
22	EDDY 5	0337	Be	ROS	US	9	57 44 99	140 10 08	3174							
1	1	0410	Bo	1		1	57 45.000	140 10.054		2005	23-41	19				
		0506	EN	1		1	57 45.018	140 9.983	2423							
		0556	Be	Net		10	57 45.021	140 10.025	3173	1000					Multinet	
		0625	Bo	1		1	57 44.976	140 10.011		1000						
		0654	EN	1		1	57 44.94	140 10.1								
22	EDS	0702	DE	DRF		11	57 44.97	140 09.99	3172						Deploy Age 3263	
22	ED6	1042	Be	Net		12	58 5.01	140 59.93	3478						Multinet	
1	1	1115	Bo	1		1	58 5.012	140 59.993		1000						
			EN	1		1										
	ED6	1207	Be	ROS		13	58 05.022	141 0.029	3476		42-60	19	YL MD AS	✓		
		1242	Bo				58 05 012	141 0.017		2005						
		1330	EN				58 05 005	140 59 983								

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Float 3263 Wake-up @ 2306 21 June local 0606 22 June '07 UTZ

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Month <u>June</u>				Year <u>2007</u>				Ship <u>Tully</u>				Cruise ID <u>2007-14</u> <u>Page 3</u>			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
22	ED7	1740	BE	ROS		14	58 30.01	142 00.02	3433						
1	1	1814	BO	1		1	58 29.982	142 0.007		2005	61-79	19	AM	✓	
1	1	1907	EN	1		1	58 30.001	141 59.982							
22	ED7	1905	BE	NET		15	58 30.022	142 0.039	3432						MPS
1	1	1959	BO	1		1	58 29.992	142 0.036		1000					
1	1		EN	1		1									
23	Z21	0914	BE	ROS	US	16	59 55 517	145 01 952	170				VL MD AS	✓	
		0918	BO				59 55 517	145 01 946		160					
		0922	EN				59 55 519	145 01 933			80	1			
23	Z20	1007	BE	ROS	US	17	59 49 976	145 02.015	190						
		1013	BO				59 50 005	145 01 972		180	81-88	8	VL MD AS	✓	
		1022	EN				59 50 048	145 01 975							
23	Z19	1236	BE			18	59 29 924	145 0 137					VL AS MD	✓	
		1242	BO				59 29 900	145 00 192	260	250					
		1247	EN				59 29.909	145 00.205							
23	Z18	1520	BE	NET		19	59 09.97	145 00.05	4039						MULTINOT
1	1	1554	BO	1		1	59 9.978	145 59.915		1000					
1	1	1624	EN	1		1	59 10.005	144 59.981							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
23	Z18	1648	BE	ROS		20	59 9.958	145 0.032	4038						
1	1		BO	1		1					90-113	24			
		1920	EN	1			59 9.966	145 0.008							
23	Z17	2135	BE	ROS		21	58 50.005	145 0.036	3953						Tide turning to flood (for ADCP ref)
		2236	BO	1		1	58 49.732	145 0.160		4038	(9 off bottom)	1			3962 m (sounder = 3952)
		2320	EN	1		1	58 49 474	144 59.702			114				= 3971 m ∴ sounder shallower
24	Z16	0125	BE	ROS	US	22	58 30.007	144 59 999	3958			24	AS VL MD	✓	
		02	BO	1						4035	13 off bottom				
		0336	EN	1			58 29.832	145 0.155			115-138				
24	Z15	0704	BE	ROS	US	23	57 59.983	144 59.993	3844				AS VL MD	✓	24 bottles tripped @ 2000 m
		0806	BO				57 59.983	145 00.021		3920					stopped 10m from bottom + LOOP
		848	EN				57 59 983	145 00.017							
24	Z14	1204	BE	ROS	US	24	57 30 021	144 59 947	3935				AS VL MD	✓	
		1310	BO				57 29 978	145 00.066		4021	139-162	24			10m from bottom
		1430	EN				57 29 98	144 59 99							
24	Z14	1521	BE	NET		25	57 30.01	145 00.06	3921						MULTINET
		1559	BO	1		1	57 29.972	145 0.065		1000					
		1619		1		1	57 29.973	145 0.027							

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Month <u>June</u>				Year <u>2007</u>			Ship <u>Tully</u>			Cruise ID <u>200714</u>			Page <u>5</u>		
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
24	Z13	1947	BE	ROS		26	57 0.131	144 59.853	3813						
		2043	BO				56 59.885	144 59.923		3888	163	1			5 m bottle
		2123	EN				56 59.696	144 59.986		(10 ft)					
25	Z12	0107	Be	ROS		27	56 30.01	144 59 983	3830		164-186	23	AS VL MD	✓	
		0219	BO		US		56 29.874	144 59 971		3906					10 from bottom
		0329	EN				56 29.812	144 59.872							
25	Z11	718	Be	ROS	US	28	56 0 044	144 59 968		3873	187	1	AS MD VL	✓	8m from bottom
		822	bo				55 59.981	145 00.055	3950						5 m bottle
		0914	EN				55 59.885	145 00 107							
25	Z10	1310	Be	ROS	US	29	55 30.010	145 0.043		3975	188-211	23	AS MD VL	✓	
		1413	BO				55 30 002	145 00.037	4059	10 m from bottom					
		1530	EN				55 29.983	144 59.856							
25	Z09	1939	BE	ROS	US	30	55 0.048	145 0.174	4010					✓	
		2058	BO				54 59.999	144 59.932		4080	212	1			
		2140	EN				55 0.055	144 59.755							
25	Z9	2148		ALGO		31	54 59.888	144 59.612	4010						Deploy Algo 3262
26	Loop3	0100		USW		-	54 49 3615	144 23 5585							Loop
26	Loop4	0648		USW		-	54 29 568	143 12 7641					DFM/MD		Loop
	Loop5	1356		USW		-	54 5 934	141 54 168					MD		

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2237 24 June UTC: Increase flow to TSC, salinity not good

Float 3262 Wakeup time 1226 local, 1926 UTC, 25 June

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE				Year 2007			Ship TULLY				Cruise ID 2007-14 p6				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
26	Loop 6	1952		USW		—	53°44.81'N	140°43.37'W					BFM.		Loop 6. →
27	Loop 7	0135		USW		—	53°24.25'N	139°35.12'W					M.D.		Loop 7. →
27	Loop 8	0657		USW		—	53°03.51'N	138°26.26'W					M.D.		Loop 8.
27	Bongo A	1013		Bongo		—	52°51'N	137°48'W					AS		0-50m Bongo
27	Loop 9	1310		USW			52°39.797	137°08.578					M.D.		Loop 9. →
27	Haide-1	1840	DE	ROS		32	52°16.996	135°55.026	3490	340				✓	
1	1	1943	BO	1		1	52°17.011	135°54.974		3550	213-234	22			
		2108	EN	1		1	52°16.993	135°54.926							
27	Haide-1	2117	BE	NET		33	52°16.98	135°57.91							
		2129	BO				52°16.96	135°54.93		250			DM.		BONGO
		2134	ET				52°16.94	135°57.86							
27	Haide-2	2332	BE	ROS	US	34	52°09.048	135°30.067	3514		235	1	AS YL MD	✓	5m Sample
28		0032	BO				52°08.942	135°30.014		3575					pumped turned off @ 5m, before sample taken
28		0110	EN				52°09.042	135°29.860							
1	Haide-3	0316	BE	ROS		35	52°00.043	135°04.015	3366					✓	
1	1	0418	BO	1		1	51°59.960	135°03.950		3422	236-257	22			3364.15m depth ok
		0520	EN				51°59.972	135°03.988							

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→ Thermosal stopped + drained then restarted. (MD)

→ Loop 7 FILTERED 0800 ON 27 JUNE - SOMEWHAT LATE. ⇒ Loop 6, 8 DONE FIRST BUT LOOP 7 MISSED
(1500 UTC)

→ Loop 9 FILTERED 0815 ON 27 JUNE

JUNE 26

2000 UTC CHECKED FILTERED LOOP WATER: *N. plumchrous* V, *Cal. pacificus* V, *Coscinodiscus*, Forams, Ostracoda

JUNE 27

0600 UTC CHECKED FILTERED LOOP WATER: *N. plumchrous* V, *Coscinodiscus*

JUNE 28

0130 UTC CHECKED FILTERED LOOP WATER: (CROSSING EDDY WATER = MANY ZOOPL.)

→ Cope nauplii; Ostracoda, juv. euphausiids, *Paracalanus*, *Met. pacifica* S, V, *O. thoma*, *Acartia*
Pseudocal, *Limaema helicina*

JUNE 29

0423 UTC LOOP WATER: Cope nauplii, Ostracoda, etc. as above + *N. plumchrous* V, *N. cristatus* V, *Lim. hel.* + *Chiono*
Some preserved in EtOH 51° 51.3' N 131° 34.34' W

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
28	HAIDA-3	0530	BE	NET		36	51 59.96	135 03.98	3366						
		0532	BO				51 59.94	135 03.94		250					BON60.
		0545	EN				51 59.95	135 03.91							
28	HAIDA-4	0724	BE	ROS		37	51 53.987	134 42.474	3254		258	1	AS VL MD	✓	
		0815	BO				51 54.016	134 42.493		3302					
		0849	EN				51 53.986	134 42.450							
28	HAIDA-5	1040	BE	ROS	US	38	51 44.777	134 19.993	3173		259-280		AS VL MD	✓	
		1133	BO				51 45.013	134 19.946		3221					
		1223	EN				51 44.696	134 20.125							
28	HAIDA-5	12:28	BE	NET		39	51 44.696	134 20.125							
		12:33	BO				51 44.696	134 20.125							
		12:50	EN				51 44.696	134 20.125		250					
28	HAIDA-6	1458	BE	ROS		40	51 34.96	133 50.02	3093					✓	+LOOP A
		1545	BO				51 35.006	133 50.010		3140	281	1			
		1618	EN				51 35.01	133 50.02							
28	HAIDA-6 B	1626	✓	USW		✓	51 34.74	133 49.48	3091		Loop B				When ship @ 10 kts. 9.6
28	HAIDA-7	1817	BE	ROS		41	51 24.973	133 25.050	3012						+LOOP A
		1903	BO				51 25.030	133 25.024		3052	282	1			
		1935	EN				51 25.05	133 24.95							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
28	HAIDA ^B -7	1943	BE	USW		✓	51 24.71	133 24.39	3010		LOOP B				10 knts leaving sta
29	Loop 10	0102		USW			50 47.426	132 23.676							
29	Loop 11	0638		USW			50 57.29	131 06.89	L				DFM.		
29	SS1	1118	BE	ROS	US	42	51 11.987	129 59.996	493		283-296	14	4L AS MD	✓	8m from bottom
		1130	BO				51 12.010	129 59.957		485					
		1148	EN				51 12.024	129 59.920							
29	SS2	1302	BE	ROS	US	43	51 13.037	129 42.910	576		297	1	4L AS MD	✓	
		1315	BO				51 13.039	129 42.934		570					8m from bottom
		1322	EN				51 13.009	129 42.983							
29	SS3	1457	BE	ROS	US	44	51 15.071	129 21.192	289					✓	
		1504	BO				51 15.086	129 21.295		280	298-309	12			→
		1524	EN				51 15.06	129 21.17							
29	SS4	1659	BE	ROS	US	45	51 21.034	129 0.0	239					✓	
		1705	BO				51 21.053	128 59.970		230	310	1			
		1710	EN				51 21.046	128 59.990							
29	SS4	1718	BE	NET		46	51 21.035	128 59.927	239						Bongo →
		1725	BO				51 21.07	128 59.86		230					
		1729	EN				51 21.07	128 59.78							

Cast type:

BOT = bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD

USW = sea water loop

MOR = mooring
 NET = 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 for each cast, do not use Ammonia products

Daily_log_book.doc

→ 29 JUNE
0630 UTC - Loop WATER: N. crist. V, N. plumbeus V, O. thomx, Harpacticoids, Lim hel., Pseudocal sp. f., Aca. long f.
Cope nauplii

→ 29 JUNE
1500 UTC - Loop WATER: N. crist. V, N. plumbeus V, cope nauplii, Pseudocal f., Calma f., Calpa f., Aca long f., Harpacticoid
Arthropoda - Limacina helicina, Clione

→ 29 JUNE -
2100 Psnix seriata
- Loop WATER: P. 470 = P. seriata, Thx longissima little else; cope nauplii, Pseudocal. sp.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE				Year 2007			Ship TULLY			Cruise ID 2007-14 P9					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
29	SS5	1934	BE	ROS		47	51 28.004	128 29.956	201						
		1940	BO				51 27.985	128 29.998		190	311-321	11		✓	2 bottom bottles
		1954	EN				51 28.004	128 30.066						✓	
29	SS6	2211	BE	ROS		48	51 20.05	128 0.14	179						
		2216	BO				51 20.05	128 0.12		170	322	1			
		2219	EN				51 20.028	128 0.103							
30	GEO1	1927	BE	ROS		49	49.16.024	123 48.49	408					✓	
		1935	BO				49 15.998	123 48.356		399	—	Ø			
			EN												
30	GEO1	1948	BE	NET	-	50	49.15.96	123 48.27	408						
		1952	BO				49.15.95	123 48.24		100					Bongo for Diver
		1955	EN				49.15.95	123 48.24							
30	GEO1	2002	BE	NET	-	51	49.15.93	123 48.22	408						
			BO				49 15.89	123 48.20		390					Bongo for Diver
			EN				49	123							

→ 29 JUNE 1800 UTC

— LOOP WATER → Copepods & nauplii, euph. juv. & eggs, Coscinodiscus, Acanthopagurus, long. f., pseudo. sp. f., Cent. abdominalis f. (19) — ^{gen.} _{so. g.}