

DAILY LOG BOOK

MISSION
NUMBER

2005 - 12

DATE:

From: 31 MAY 2005 to: 18 JUNE 2005

VESSEL:

JOHN P TULLY

PROJECT:

LINE P

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE				Year 2005			Ship JOHN P TULLY				Cruise ID 2005-12				
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							
1	JF1	0807		UWS			48 15.92	123 30.61					DT		Loop #1
1	JF2	0942		UWS			48 17.97	123 59.89					DT		Loop #2
1	JF3	1117		UWS			48 26.98	124 30.00					HM/AS		Loop #3
1	JF4	1258		UWS			48 32.28	125 00.08					"		Loop #4
1	P1	1452	BE	ROS		001	48 34.50	125 29.99	119		1	1			T: 11.75 S: 30.43
		1455	BO				48 34.48	125 29.94		110					BOT @ 5m
		1458	EN				48 34.49	125 29.95							
1	P2	1700	BE	ROS		002	48 35.97	126 00.01	118		2-9	8			
		1702	BO				48 35.99	126 00.04		110					
		1713	EN				48 36.05	126 00.09							
1	P2	1800	BE	Net		3	48 36.06	126 01.19	118	110					Bongo
	P3	1930	BE	ROS		4	48 37.231	126 20.005	?						
		1943	BO				48 37.14	126 20.26		750	10	1			Surface sample
		1954	EN				48 37.19	126 20.41							(5m)
1	Pre-P4	2121	BE	ROS		5	48 37.612	126 35.036	1250						6 @ 1000m
		2140	BO				48 37.818	126 35.100		1000		8			3 @ 800m
		2155	EN				48 38.08	126 35.36							1 @ 5m

Cast type:

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1	P4	2256	RG	MOR		6	48 37 94	126 34 45					D.T.		SED TRAP RECOVERY
2	P4	0120	BC	ROS	U.S.	7	48 38 91	126 39 19	1326		11-27	17	H.M./A.S.	✓	T: 12.61 S: 32.28
		0127	BO				48 38 03	126 40 09		200					SHALLOW CAST
		0142	EN				48 38 69	126 40 36							
2	P4	0212	BC	NET		08	48 39.30	126 40.33	1326	250					250 m 105
		0235	BC	NET		09	48 39 36	126 40.38		50					50 m AKAASH
		0250	BC	NET		10	48 39.36	126 40 38		50					run 50 m AKAASH
2	P4	0305	BC	ROS		11	48 39.07	126 40.07	1300					✓	DEEP CAST
		0327	BO				48 39.13	126 40 44		1310	28-46	19			WINDY, BUMPY
		0409	EN				48 38.74	126 40 52							LARGE # T
2	P4	1630	DE	MOR	—	12	48 38.7	126 35.8	1227		—				Deploy P4 mooring
2	P5	2006	PE	ROS		13	48 41.550	127 9.833	2081						
1	1	2039	BO	1		1	48 41.887	127 10.007		2002	47	1			
		2107	EN	1		1	48 42.443	127 10.056							
2	~ P6	2322	DE	DRF		14	48 44.33	127 38.29	2540						Deploy float 1413
															1 km east of P6

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2	P6	2340	BE	ROS	U.S.	15	48 44 60	127 39 98	2539		48	1	H.M.	✓	T: 12.09 S: 32.36
3		0007	BO				48 44 81	127 39 99		2000					5m BOTTLE
		0034	EN				48 44 77	127 40 14							
3	P7	0258	BE	ROS	U.S.	16	48 46 51	128 09 97	2501	2000	49	1	H.M.	✓	T: / S: /
		0327	BO				48 46 37	128 10 56		2005					BOT@5m - SAL/CHL/MUTS
		0354	EN				48 46 76	128 11 04							
3	P8	0605	BE	ROS		17	48 48 94	128 40 14	2513						
			BO								50-69	20			
		0717	EN				48 48 904	128 40 006							
3	P8	0737	BO	NET		18	48 48 899	128 40 078		250					Bongo
3	P9	0956	BE	ROS		19	48 51 416	129 10 043							
		1021	BO				48 51 290	129 10 385		2000	70	1			5m bottle
		1050	EN				48 51 528	129 10 278							
3	P10	1307	BE	ROS	U.S.	20	48 53 59	129 39 98	2677		71	1			T: 11.83 S: 32.27
		1335	BO				48 53 64	129 40 12		2000					BOT@5m - SAL/CHL/MUTS
		1402	EN				48 53 62	129 40 24							

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							Latitude	Longitude							
3	P11	1620	BE	ROS	U.S.	21	48 56 04	130 09 94	2747		72	1			7-11.8 SL 32.3
		1645	BO				48 55 91	130 10 02		2005					+LOOP
		1715	EN				48 55 95	130 10 145							
3	P12	1935	BE	ROS		22	48 58.118	130 39.893	3222		73-95	23			SL @ 3000m.
		2021	BO				48 58.931	130 39.931		3275					sal offset .005 (at 200)
		2126	EN				48 57.868	130 39.984							
3	P12	2141	BO	NET		23	48 58.066	130 39.936		250					Bongo, 265m out
3	P12	2202	BO	NET		24	48 58.315	130 39.821		50					Ring net (Alc ash)
3	P12	2248	BE	ROS	U.S.	25	48 58 27	130 39 89	3275		96-112	17			T: 11.66 S: 32.35
		2252	BO				48 58 33	130 39 86		200					SHALLOW CAST
		2307	EN				48 58 19	130 39 68							
4	P13	0438	BE	ROS		26	49 02 64	131 39 68	2890						
		0507	BO				49 02 788	131 40 05		2005	113	1			bottle @ 5m
		0535	EN				49 03 03	131 40 28							
4	P14	1131	BE	ROS	U.S.	27	49 07 38	132 39 92	3386		114	1			T: 11.57 S: 32.30
		1157	BO				49 07 35	132 39 91		2000					BOT @ 5m - SAL/CHL/NUIS
		1223	EN				49 07 31	132 39 92							

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P13 2130 June 3 Peter crashed 2 times @ start of cast!

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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							
4	P15	1800	BE	ROS		28	49 11.9	133 39.9	3828						Surface sample + LOOP
		1829	BO				49 11.98	133 39.9		2005	115	1			Lindsay up @ 1115
		1855	EN				49 11.91	133 40.16							
4	P15	1902		DRF		29	49 11.88	133 40.32	~3400		-	-			Deploy Argo 1412
5	P16	0049	BE	ROS	U.S.	30	49 16.81	134 39.46	3614		116-139	24	11.4/AS	✓	T: 10.98 S: 32.27
		0148	BO				49 17.36	134 39.46							DEEP CAST
		0253	EN				49 18.15	134 39.43							
5	P17	1316	BE	ROS	US	31	49 21.01	135 40.06	~3600		140	1		✓	T: 10.53 S: 32.32
		1346	BO				49 21.01	135 40.02		2000					
		1413	EN				49 21.01	135 40.05							
5	P18	1937		ROS		32	49 25.987	136 39.738	3800					✓	
1	1	2003		1		1	49 26.255	136 39.530		2005	141	1			
1	1	2024		1		1	49 26.548	136 39.426							
6	P19	0138	BE	ROS	U.S.	33	49 29.93	137 39.97	3896		142	1		✓	T: 10.14 S: 32.37
1	1	0205	BO	1		1	49 30.08	137 39.85		2600					
1	1	0232	EN	1		1	49 30.29	137 39.90							
6	P20	0729	BE	ROS		34	49 33.988	138 39.995	3934					✓	
1	1	0731	BO	1		1	49 33.989	138 39.973		200	143-155	13			
1	1	0744	EN	1		1	49 33.991	138 39.965							

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P10 - bottles 23+24 not tripped when rosette recovered. Bottle depths 50/75m

(10m? 5m)

~~***~~ bottle spigot # 10 NFG # 21 too stiff

→ Fixed Jere 5 Dam / new snap hook on tigger winch

49° 29.165 N - 137° 30.28 W → 5-6 killer whales, edge of the eddy?

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							Latitude	Longitude							
6	P20	0809	BO	NET		35	49 33.996	138 40.000	3933	250					Bongo 250 m
6	P20	0828	BO	NET		36	49 34.000	138 39.971		50					Bongo 50 m
6	P20	0845	BO	NET		37	49 34.003	138 39.970		50					Ring 50m
6	P20	0900	BE	ROS		38	49 33.992	138 40.064	3933					✓	Deep Cast
1	1	1001	BO	1		1	49 33.984	138 40.034		4018	156-179	24			
		1116	EN	1		1	49 34 02	138 40 07							
6	P21 EDDY	1641	BE	ROS		39	49 38 00	139 39 95	3925					✓	
		1709	BO				49 37 95	139 40 002		2001	180-203	24	DT		Eddy SW 0945
		1806	EN				49 37 99	139 39 89							0-2001-1954-2000
6	P21	1819	BE	NET		40	49 38 01			250					Lindsay up 1030
4	P21	1840	BE	NET		41				50					Bongo to 250 m
6	P21	1856	70m	NET		42	49 38 07	139 39 838		50					Bongo to 50m
															Ring net 50m
6	P22	2352	BE	ROS	US	43	49 42 02	140 40 04	4254		204	1	H.M./DT	✓	T: 10.67 S: 32.49
7		0031	BO				49 41 98	140 40 04		3000					3 BOT @ 3000m - DARK
		010	EN				49 41 99	140 40 72							BOT @ 5m - SAL/CNL/MLTS
															LINDSAY BACK ASLEEP
															2 BOT @ 1150 - SWIM

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(02 min)

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P21 - bottom of cast came up to 1954m, forgot to trip bottle, went back 2000m

} Closed 6 Niskins, but only surface bottle has a serial number
The other Niskins are only for water, not for samples

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							Latitude	Longitude							
7	P23	0512	BE	ROS	0.5	44	49 46.093	141 39 955	4017		205	1		✓	T: S:
		0540	BO				49 45.750	141 39 787		2005					
		0605	EN				49 45.424	141 39 708							
7	P24	1018	BE	ROS		45	49 50.184	142 40 014	3956		206	1	DT/AM	✓	
1	1	1051	BO	1		1	49 50.190	142 39.984		2004					
		1120	EN				49 50 18	142 40 04							
7	P25	1524	BE	ROS		46	50.00032	143 36 508	4098		207			✓	
		1558	BO				50 00 113	143 36 583				1			bottle @ 5m
		1628	EN				50 00 206	143 36 547							
7	P35	1928	BE	ROS		47	49 59.952	144 18.130	4113						
1	1	1941	BO	1		1	50 0.020	144 18.412		1005	208	1		✓	
		1951	EN				50 00.091	144 18 617							
7	P26	2254	BE	ROS		48	50 0.599	144 58.718							Fluorometer not
1	1	2259	BO	1		1	50 00 59	144 58 68		200	209-229	21		✓	disconnected
		2316	EN				50 00.61	144 58 85							1st DMS Cast
8	-P26	0138	BE	DRF		49	50 07.005	144 57 112	4198						Start deep FDX
		0236	EN				50 07 332	144 56 859							All away!

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FD Star UNF #69 156.475 MHz - bridge confirmed
#68 156.425 MHz

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							Latitude	Longitude							
8	P26	0344	BE	ROS		50	49 59.99	145 00 04.0	4211					✓	2 nd DMS cast
			BO							200	230-242	13			
		0404	EN				50 00.313	145 00 06.7							
8	P26	0415		NETS		51	50 00.530	144 59 64.5	4210	250					LVNH 260
	P26	0525	BE	ROS		52	50 00 08.5	144 59 93.2	4210						2 nd LVNH 250m
		0626	BO				50 00 36.1	145 00 78.5		4260	243-266	24	DT SV	✓	Deep Cast
		0800	EN				50 00 36.8	145 00 98.3							
8	P26	0941	BE	ROS		53	50 00.013	144 59 97.4	4213						DMS cast
		0944	DO				50 00.017	145 00 01.2		200	267-279	13			
		0957	EN				50 00.024	145 00 00.1							
8	P26	1505	BE	NET		54	50 00.41	145 00.15							Not done?
			EN							250					BIONESS
8	SOLAS	1640	RE	MOOR		55	50 01.7	144 56.2							Solas Moor. Rec.
8	Sed trap	2204	RE	Sed trap		56	49 57.548	145 00 32.9	3937						Sed trap recov
			MOOR												
11	P26	1820	DE	MOOR		57	49 58.02	145 01.81							
11	FD★	2025	REC	MOOR		58	50 12.45	144 47.68							FD★ reading
11	P26~	2034	BO	NET		59	50 12.29	144 48.113		400					SCOR (no wire!)

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} Fluorometer + O₂ sensor dommed off for 2nd DMS cast.

} Fluor + O₂ back for deep cast

FD ★ recovery - release code sent 1220 local range 1099 meters
- All on deck 1330 hrs.

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11	P26	2138	BO	NET		60	50 12.178	144 47.844		1000m						Scor
12	P26	604	BO	NET		61	50 11.818	145 06.578		150m						Bonk
	Scas	1802				62	50 01.694	144 56.208								
12	ARGO(P26)	2315	BE	DRIF		64	57 07.16	144 56 76					W.M.			Deploy empty mooring
	Scas	1802				63	50 01.781	144 56.112	4260							DEPLOY SCAS
13	P32	0317	BE	ROS		65	50 53.981	145 00 041	4218							
		0355	BO				50 53.909	144 59 903		3005	280-303	24				Cali-cast
		0433	EN				50 54.242	144 59 341								
13	W1	0940	DE	ROS		66	51 14.017	143 45.060	2142							
1		1006	BO			1	51 14.034	143 45.025		2005	304	1				
		1031	EN			1	51 13.996	143 44.934								
13	W2	1544	BE			67	51 31.960	142 29.981		3880						
		1610	BO				51 31.950	142 30.086			305	1				bottle @ 5m
		1637	EN				51 31.898	142 30.116								
13	W3	2104	DE	ROS		68	51 47.978	141 23.999	3715		306-327	22				
1		2132	BO			1	51 47.870	141 24.319		2005						
			EN													
13	W3	2227	DE	DRIF		69	51 48.041	141 24.460								Argo

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P32 - repositioned pencil sharpener

W3 - located pencil sharpener in new position (search pattern Delta)

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							Latitude	Longitude							
14	W4	0354	BO	ROS		70	51 58 9.79	140 00 06.6	3679		328	1			
		0421	BO				51 58 9.04	140 00 38.3							
		0446	BO				51 58 7.21	140 00 52.0							
14	W5	1016	BE	ROS		71	52 8.479	138 40.048	3530					✓	FI noisy
		1041	BO				52 8.443	138 40.116		2005	329	1			
		1108	EN				52 08.36	138 40 07							
14	W6	1622	BE	ROS		72	52 18 47.9	137 19 9.54							
		1649	BO				52 18 48.1	137 20 08.3			330-351	22			
		1734	EN				52 18 56.5	137 20 26.9							
14	W7	2241	BE	ROS		73	52 28.56	135 59.983	3478						FI still noisy
		2309	BO				52 28 63	136 00 41		2005	352	1			
		2337	EN				52 28 80	136 00 75							
15	W8	0450	BE	ROS		74	52 38 51.9	134 40 02.6	2979					✓	
		0515	BO				52 38 59	134 39 9.17		1998	353-374	22			
		0607	EN				52 38.60	134 39.52							
15	W9	0846	BE	ROS		75	52 43.990	134 0 11.5	2675					✓	
		0915	BO				52 44.062	134 0.106		2005	375	1			
		0943	EN				52 44 02.0	134 0 1.56							

Cast type:

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USW = sea water loop

MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:

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

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE				Year 2005			Ship JOHN P TULLY				Cruise ID 2005-12				
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							
15	EADY 05	1147	BE	ROS	U.S.	76	52 48.0N	133 29.95	2858		376-397	22	W.M./A.S.	✓	T: 12.64 S: 32.03
		1215	BO				52 47 96	133 29 97							DMSD NOT TAKEN
		1306	GM				52 48 05	133 30 02							
15	EADY 05	1407	BE	NET		77	52 48 04	133 29 96	2860	250			N.M./A.S.		1 st BONGO (MACKAS)
				NET		78				50					Bongo to 50m
15	EADY 05	1423	BO	NET		79	52 47.929	133 29.795		50					lung to 50m
		1611	BE	NET		80	52 46 76	133 27 929		250					Broness (day)
15	W10	1827	BE	ROS	U.S.	81	52 51.954	132 56.972	2498	2300					
1	1	1859	BO	1		1	52 51 880	132 56 840			398	1			
		1930	EN	1			52 51.564	132 56.424							
16	SS0	0918	BE	ROS	U.S.	82	50 59.990	130 50.216	2626						
1	1	0945	BO	1		1	51 0.830	130 50.210			399-404	6			
		1017	EN	1			51 0.984	130 50.232							
16	SS0.2	1114	BE	NET		83	51 02 33	130 40 04	2290	250			N.M./A.S.		Moira's BONGO
16	SS1	1437	BE	ROS	U.S.	84	51 11.99	130 00.04	536				N.M./A.S.	✓	T: 12.40 S: 31.83
		1445	BO				51 11 98	129 59 99		488	405-420	16			
		1508	GM				51 12.01	130 00.02							

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— DNPA NOT SAMPLED

DAILY LOG

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INSTITUTE OF OCEAN SCIENCES

Month <u>JUNE</u>				Year <u>2005</u>			Ship <u>TULLY</u>				Cruise ID <u>2005-12</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							
16	SS2	1630	BE	ROS		85	51 12 977	129 43 022	580	596	421	1	DT		T=12.7895 S=31.86
		1640	BO				51 12 922	129 43 043							
		1649	EN				51 12 896	129 42 976							
16	SS3	1825	BE	ROS		86	51 14 791	129 21 268	292	283					T=12.43 S=30.88
		1832	BO				51 14 778	129 21 229			422-435	14			
		1849	EN				51 14 704	129 21 017							
16	SS04	2029		ROS		87	51 20 990	129 0 090	240						
1	1	2034		1		1	51 21 011	129 0 103		224	436-441	6			Lindsay's bottles/10-d
		2043					51 21 041	129 0 134							
16	SS05	2258	BE	ROS	V.S	88	51 22 98	128 30 03			442-452	11	HM/MA	✓	T:13.32 S:31.38
1	↓	2302	BO	↓		↓	51 28 000	128 30 000							
1	↓	2317	EN	↓		↓	51 28 063	128 29 942							
16	SS06	0128	BE	ROS		89	51 20 006	127 59 987	179	165	453	8	MA/HM	✓	T:13.364 S:28.312
1	↓	0134	BO	↓		↓	51 20 005	127 59 988							7 bottles closed @
	↓	0139	EN	↓		↓	51 20 015	127 59 831							20 m hr Akashi, no S/N
16	SS07	0317	BE	ROS		90	51 24 769	127 47 606	125		454-461	8			
			BO	↓		↓	51 24 739	127 47 580							
			EN	↓		↓	51 24 661	127 47 566							

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Placed 7 bottles @ 2m (N1-7) ✓
11 1 11 @ 5m (N8) ✓

