

DAILY LOG BOOK

MISSION
NUMBER

2004-10

DATE:

From:

JUNE 1

to:

JUNE 18 2004

VESSEL:

J.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			2004			Ship			Tully			Cruise ID			2004-10		
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															
01	JF1	2333		loop			48° 16.24	123° 34.61	174		loop		ST/T5			WENT PAST THE							
02	JF2	0109		loop			48° 18.01	124° 00.04								STATION							
	JF3	0312		loop			48° 28.08	124° 34.787			loop												
02	JF4	0504		loop			48° 30.58	125° 00.22	60m		loop												
02	P1	0718	BE	R05	US	1	48° 34.57	125° 30.07	116		1	1	DY			5m sample							
1	1	0721	BO	1			48° 34.57	125° 30.10		112													
	1	0724	EN	1			48° 34.58	125° 30.08															
02	P2	0940	BE	R05	US	2	48° 35.94	126° 0.18	118							DL = 1238 stopper seized							
1	1	0943	BO	1			48° 35.92	126° 0.20		113	2-9	8											
	1	0951	EN	1			48° 35.91	126° 0.25															
02	P2	1013	BO	NET		3	48° 35.98	126° 0.08	118	105						Bongo							
2	P3	1151	BE	CTD R05	US	4	48° 37.45	126° 20.03	837		10	1	ST										
		1207	BO				48° 37.45	126° 20.03		835													
		1216	EN				48° 37.56	126° 19.96															
2	P4	1354	BE	R05	US	5	48° 38.94	126° 40.07	1305	1335	11-30	20	ST	✓		computer crashed							
		1414	BO				48° 38.86	126° 40.20		1333						at start							
		1459	EN				48° 38.77	126° 40.42															
2	P4	1510	BO	NET		6	48° 39.001	126° 39.002															
1		1538	EN				48° 39.020	126° 39.987															

Cast type: USW = sea water loop
BOT = bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD

bottle firing method:
US = up / stop
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Time Code
BE = beginning time of cast
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RE = recover mooring time

28 May 2003
Daily_log_book.doc

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

DAILY LOG

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Month			Year			Ship			Cruise ID						
June			2004			Tully			2004-10						
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							
02	P4	1630	BE	ROS		7	48 38.992	126 39.979	736						
		1634	BO			1	48 38.989	126 39.986		201	31-46	16			PAR on
		1652	EN				48 39 02.0126	40.036							
02	P4	1740		MOOR		8									P4 mooring recovery
03	P5	0233	BE	CTD/R		9	48 41.53	127 09.98	~2100		47	2	ST		PAR OFF
		0258	BO			1	48 41.556	127 10 066					DT		5m DEEPIN 1140m bottle - Phil CBC
		0325	EN				48 41 664	127 09.990							
03	P6	0548	BE	CTD/R		10	48 44.540	127 39.908							
		0611	BO			1	48 44 624	127 40 032			48	1	DT		Wiskin 0.5m
		0636	EN				48 44 753	127 40 148							
03	P7	0850	BE	CTD/R		11	48 44.60	128 10.00	2520		49	1			Wiskin 5m
		0915	BO			1	48 46.45	128 10.03		2005					
		0933	EN				48 46.61	128 10.02							

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June 02 2004 P4 Event 7 - Put PAR Sensor on for 200m cast, All casts are in place for PAR

03 . P5 - Surface data on upcast may show ferry numbers while @ surface. Some confusion on what was "Surface" with Heave Comp.

- PAR sensor removed prior to P5. (S.T)

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position	Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
3	P8	1201	BE	ROS	45	12	48°49.03	128°40.04	2440			50-69	30	ST	✓	gorgonian morning, bottle 1 valve open
		1226	BO				48°48.92	128°40.04			2008	+ Loop * (SAL, NUT, CHL)				
		1311	EN				48°48.98	128°40.04								* comparison loop
3	P8	1346	BO	NET		13	48°40.67	129°22.88			250					sample taken, while Rosette at 5m
3	P9	1605	BE	NET		14	48°51.436	129°10.048								
		1632	BO				48°51.407	129°10.088				70	1			5m Niskin
		1658	EN				48°51.553	129°09.985								
3	P10	1903	BE	NET		15	48°53.52	129°39.86	2660							
		1925	BO				48°53.63	129°39.94				71	1			5m Niskin
		1946	EN				48°53.75	129°38.92								
3	P11	2147	BE	ROS/EN		16	48°56.04	130°9.97	2767							
		2209	BO				48°55.98	130°9.89				72	1			5m Niskin
		2231	EN				48°55.78	130°9.74								
4	P12	0047	BE	ROS	US	17	48°58.26	130°39.95	3300							
		0050	BO				48°58.25	130°39.97			2003	73-89	17	TS	✓	PAR ON
		0104	EN				48°58.24	130°39.95				(+999)	18			shallower cast
4	P12		BO	NET		18	48°58.21	130°39.89			150					extra sample # due to operator error

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→ 0012: wrong STN name in header, P12 should be PB

DAILY LOG

Mooring 49 32.769
132 42.441

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June		2004		Tulley		2004-10								
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	P12	0203	BE	ROS	45	19	48° 58.23	130° 39.91	3300		90-112	23	ST/TS	PAR off -
		0249	BO				48° 58.24	130° 39.94		3279			DT	Deep cast
		0400	EN				48° 58.188	130° 40.062						
4	P13	0803	GE	ROS		20	49° 2.61	131° 40.00	?				DT	
		0837	BO			1	49° 2.61	131° 40.05		2005	113	1		5 m Niskin
		0858	EN				49° 2.60	131° 38.99						
4	P14	1303	BE	CTD R		21	49° 07.30	132° 40.01	3324				ST	5 m Niskin
		1328	BO				49° 07.21	132° 39.91		2005	114	1		
		1352	EN				49° 07.12	132° 40.08						
4	Diagn	2021	DE	MOR		22	49° 32.769	132° 42.441		320				Whole water
5	P15	0119	BE	CTD		23	49° 11.95	133° 40.04	3419		115	1	ST	transmissometer
		0136	BO	ROS			49° 11.73	133° 40.12		2003				spiking again
		0202	EN				49° 11.49	133° 40.42						
5	P16	0600	BE	ROS		24	49° 17.107	134° 40.142	3675					
		0603	BO				49° 17.071	134° 40.088		203	116-132	17		
		0632	EN				49° 17.050	134° 40.042				18		
5	P16	0640		net		25	49° 16.905	134° 40.327		250				

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P16 2300 lead - Shallow cast - went to 200m then came up to 175. Bottle not tripped @ 200 so sent back down.

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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	
							Latitude	Longitude						
5	P16	0857.0E	BE	ROS		26	49 17.07	134 40 09	3640					check con file used - 2004-10-0012.
1	1	0941 00	DO	1		1	49 16.98	134 40.01	3683	133-156	24	101		Trans. TU @ 200 with →
		1045					49 16.99	134 40.08						
5	P17	1525	BE	AB/R		27	49 20 885	135 40 042	3667					
		1530	BO				49 20 900	135 40 052	2000	157	1			Net @ 5m
		1614	EN				49 21 001	135 40 079						
5	P18	20:21	BE	ETD/12		28	49 26 066	136 40 066	3830					
1	1	20:41	BO	1		1	49 26.23	136 40.24	2005	158	1			
		21:04	EN				49 26 366	136 40 362						
6	P19	0129	BE	ROS	US	29	49 30.03	137.39.94	3925					
		0159	BO				49 30.23	137.39.84	2003					transmissometer trace looks good.
		0226	EN				49 30.76	137.39.03						
8	P20	0706	BE	ROS		30	49 34 148	138 39 725	3963					DWS weight shadow
1	1	0710	BO	1		1	49 34 180	138 39 784	200	166-178	13			
		0728	EN				49 34 242	138 39 629						

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After P16:

I was going to change the transmissometer cable, take out the Y connect + re-splice. When I undid the connection of the cable to the CTD, there was corrosion around a couple of pins. So I cleaned everything all up first + see if that helps before I do any splicing. The Y cable goes to the transmissometer + oxy sensor, not the PAR as I was told. (S.T.) in the 5

P-17 - 0800 local ~ Transmissometer spikes @ 600 on down cast. Also on up cast

Prior to P19:

* Y cable from oxy sensor + transmissometer was removed - 2 cables going straight to the above 2 sensors were put in place of the Y. (S.T.)

June 4 (0140 UTC) Thermosalinograph time was out : Computer reads 01:41; Thermosal reads 01:24. We shut it down, restarted it up New File name 2004-10-0002.tex
Read lat 49° 30.12 Thermosal time 01:45 (S.T.)
Long 137° 40.02 Comput time 01:44

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JUNE		2004		SDHU 9 JULY		2004-10									
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							
5	P20	0855		NET		31	49 34.11	138 40.06	3963	250					
5	P20	0825	3E	Ros		32	49 33.95	138 39.82	3964						Some Trans sinking @ 3450m & stayed low
1	1	0911	Bo	1		1	49 34.10	138 39.83		41026	179-202	24	64		
		1025	EN				49 33.95	138 40.06							
6	P21	1451	BE	Ros		33	49 38.00	139 40.02	3956		203.	1	ST.		riskin & sm
	1	1540	Bo	1			49 38.05	139 40.022		2004					
	1	1541	EN				49 38.008	139 40.015							
86	P22	2027	3E	Ros		34	49 41.96	140 39.94	3850						
1	1	2055	Bo	1		1	49 41.99	140 39.94		2005	204-214	11			5 w Nisk & samples for Phil & Dave
	1	2121	EN				49 42.00	140 39.97							
07	P23	0146	BE	Ros	US	35	49 45.93	141 39.90	4049		215-221	7	ST	✓	new transmissio.
		0213	Bo				49 45.97	141 39.98		2005					- see notes →
		0239	EN				49 46.02	141 40.03							- transmissometer
07	P24	0703	3E	Ros		36	49 50.22	142 39.94	3983						trace looks OK.
1	1	0733	Bo	1		1	49 50.22	142 39.99		2005	222	1	DY		5 w Nisk
		0801	EN				49 50.19	142 40.01							-trans no spikes

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1-2 03:00 UTC - transmissometer spikes at 1100 & 1600 on down cast

June 6 - Prior to P23 - put in transmissometer from the spare CTD
(serial # 498 D2 + changed into in can file to match. will see
if spiking re-occurs. (5/6)

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							Latitude	Longitude							
07	P25	1209	BE	ROS	US	37	50°00.00	143°36.31	4114		223	1	S.T	✓	* see note →
		1240	Bo				49°59.99	143°36.36		2005					- trace looks OK -
		1308	BN				50°00.00	143°36.27							
07	P35	1607	BE	CD /R		38	50°00.08	144°18.167	4142					✓	
			BO				49°59.990	144°18.203		2003	224	6	DT		5m Netting/5 bottles on
		1655	EN				50°00.001	144°18.234							
07	P26	2153	EN	MOR		39	50°06.92	144°57.12							FD star deployed
07	P26	2308	BE	ROS		40	50°00.61	144°58.65	4190				ST		DMS cast
1	1	2311	BO	1		1	50°00.68	144°58.68		203	225-243	19			PAR ON
		2325	EN	1			50°00.98	144°58.63							
		2350		NET		41	50°00.54	144°58.55	4190	250					
8	P26	0042	BE	ROS		42	50°00.55	144°58.74	4432						
		0141	Bo				50°00.54	144°58.69		4317	244-267	24		✓	PAR OFF
		0312	EN				50°00.510	144°58.652							→
8	P26	0538	BO	SCORE		43	49°59.97	144°57.87	4166	50					

Cast type:

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28 May 2003

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DRF = drifter

Re: TRANSMISSOMETER:

* - I put the Y cable back on the CTD (transmissometer + oxygen) + hooked up precast the PAK cable again. We'll see how it goes. (S.T.)
during update → data is being logged, but doesn't look right & transmiss. reading 91, whereas it's cast I didn't change anything in computer... Shouldn't have lost any data, hopefully.
Post = what happened was → I didn't notice for some reason the con file the conductor was using was .0010 box which contained the old transmissometer calibration numbers. I changed it and re-ran the cast in the archives + it looks more reasonable now. We'll see how P35 pans out.

P35 0900 local - 2000m cast. 5m Niskin / 10m UBC x 5 bottles Tostell

Forgot pump: run to 46m back

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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						
08	P26	0933		NET		44	50 0.24	145 0.70		50~				50m SCOR
08	P26	0959	BE	ROS		45	50 0.25	145 0.70	4226					
1	1	1002	BO	1		1	50 0.25	145 0.71		200	268-279	12		Durs
8	P26	1101	BE	ROS		46	50 0.0.12	145 0.0.66	4226		280-287	8	ST	1° prod cast
		1105	BO				50 0.0.15	145 0.0.65		100				
		1111	EN				50 0.0.18	145 0.0.61						
8	P26	1312	BO	NET		47	50 0.0.21	145 0.0.71	4226	250				HOUSE SCOR
08	P26	1329		DRF		48	50 0.0.35	145 0.0.71		100				PROD MOD. 1 NG
08	SEAS	1500		MOOR										Solas Recovery
08	P26	2040		DRF			50 0.0.14	145 0.0.60						RECOVER PROD. DRF
08	P26	2200		MOOR										PROD. DRF
9	ago	0908		DRF		—	49 59.83	147 0.0.78						PROD. DRF
9		1712		SKIM		49	50 0.0.945	144 55.789						SKIM Deploy
9	P26	2119		MOOR		50	49 57.92	145 03.45	4030					SKIM Deploy
11	P26	0120		MOOR		51	50 10.498	144 52.65						SKIM Deploy

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- re-set Thermosalinograph (June 8 49' 51.03 00:40)
to match computer time (June 8 145 06.46)
(Lucca out bay 13 minutes) S.T.

1200 local
June 11 - Pick up S. Solas. Empty Morrh. Deploy 1600
1900 UTC

Woke float up @ 0844 UTC

1420 CED TRAP STU P Start 49 58 947 145 00 974 Zoom Trap 700m Kulin
1445 Start 2770 Kulin
Deploy Anchor 49 57 92 145 03 45 605 GPS

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							Latitude	Longitude						
11	P49	0717	BE	ROS	US	51	50°54.15	144°17.27	3614		288-311	24	ST	BOT 19 DIDN'T TRIP
		0745	BO				50°54.17	144°17.27		2002				
		0829	EN				50°54.19	144°17.17						
11	P49	0840	-	DRF	-	-	50°54.081	144°16.725		-	-	-	-	FLOAT 956
	Loop 1	1056					50°54.87	143°45.76	3866	Loop			ST	
11	Loop 2	1503					50°58.50	142°31.80	3646	Loop			WM	
11	Loop 3	1910					51°0.85	141°25.47	3880	Loop			TY	
11	R17	2059	SE	ROS	US	52	51°2.03	140°55.99	3053				TY	Bot 19 didn't trip (again)
1	1	2113	BO	1		1	51°2.02	140°55.96		1005	312-335	24		
	1	2154	EN				51°2.00	140°55.93						
11	Loop 4	2300					51°03.15	140°38.61	3815	Loop			ST	
12	Loop 5	0303					51°07.372	138°26.14	2810	Loop			WM	
12	Loop 6	0700					51°09.17	138°28.30		Loop			TY	
12	R12	1052	BE	ROS	US	53	51°13.00	137°23.04	3649					
1	1	1120	BO	1		1	51°13.05	137°23.94		2000	336-359	12	ST	✓
	1	1202	EN				51°13.07	137°22.94						
12	R12	1212	-	DRF	-	-	51°13.077	137°23.082						Deploy Aug 952
12	Loop 7	1500					51°08.650	136°23.423						Loop 1034 0935
							51°09.5	136°33.3	70510	20	1500 UTC	1034	541915	LOC

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3385	}	160m
3225		
3275		
3250		
<u>3290</u>		

3515	}	100m
3225		
3410		
3280		
3210		
3260		

3345	}	50m
3210		
3290		
3225		
3220		

3255	}	5m
3230		
3245		
3235		
3220		

185

37

0.3237

Prior to R12 - took canouse off + gave it a cleaning. See if Bot 19 brings (5x)
 It worked! 19 did close thanks Sheila

Strong current towards NW: influence of the eddy? We'll have to keep a close eye on that
 Loop #7 - Sample drawn @ 0800 local / pos'n taken @ 0935 local - sorry

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month			Year			Ship			Cruise ID						
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							
12	Loop 8	1925				54	51 03.38	138 19.55							
	ED 1	2300				54	51 00.016	134 30.206	3395						Pressure case test
	ED 1	6133	BE	CTD		56	51 00.35	134 30.58	3395	205			ST	✓	PAR ON
13		0135	BO				51 00.37	134 30.58		205					(Event #55 is a blank - had computer problem)
		0138	BN				51 00 41	134 30. 61							
	ED 2	0215	BE	CTD		57	51 04.96	134 29.80	3404						
		0218	BO				51 04.96	134 29.85		205					
		0221	BN				51 04.98	134 29.96							
	ED 3	0301	BE	CTD		58	51 10 06	134 29 819	3375				MS	✓	
		0304	BO				51 10 031	134 29 722		214					
		0307	BN				51 10 057	134 29 996							
	ED 4	0345	BE	CTD		59	51 15 062	134 30 149	3385				MS	✓	
		0352	BO				51 15 112	134 30 197		210					
		0356	BN				51 15 146	134 30 192							
	ES	0435	BE	CTD		60	51 19 867	134 30 175	3355						
		0440	BO				51 19 889	134 30 158		210				✓	
		0444	BN				51 19 848	134 30 093							

Cast type:

BOT = bottle cast, no CTD
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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
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RE = recover mooring time

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

28 May 2003

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12th June

2300 -

EDS1 -

Wade pressure test on instrument cases. 2 cast - 1000m
Saw humpback whale 1/2 cable a stern of ship

EDS

Bridge reports

strong drift

to port

(west)

e. 01:20.543

→ 51

20.543

134

29.022

-

Lots of porpoise & birds

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month				Year				Ship				Cruise ID			
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							
13	E6	0528	B6	CTD		61	51 25 033	134 30 245	3288				N ²		
		0531	B0				51 25 042	134 30 293		210					
		0535	EN				51 25 021	134 30 397							
13	E7	0616	B6	CTD		62	51 30 054	134 30 486	3196				N ²		
		0621	B0				51 30 143	134 30 722		210					
		0624	EN				51 30 215	134 30 898							
13	E8	0703	BE	CTD		63	51 35 107	134 30 186	3308						
		0707	B0				51 35 082	134 30 202		210					
		0709	EN				51 35 078	134 30 185							
13	E9	0746	B6	CTD		64	51 39 581	134 30 044	3266						
		0750	B0				51 39 912	134 30 090		210					
		0753	EN				51 39 944	134 30 128							
13	E10	0829	B6	CTD		65	51 44 970	134 30 061	3245						
		0832	B0				51 44 984	134 30 055		210					
		0835	EN				51 44 998	134 30 052							
13	E11	0912	B6	CTD		66	51 50 011	134 30 078	3190						
		0916	B0				51 50 020	134 30 132		210					
		0919	EN				51 50 000	134 30 161							

Cast type: BOT = bottle cast, no CTD
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DRF = drifter

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DN = down / no stop

Time Code BE = beginning time of cast
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13 E7 2616 UTC Transmittance spike @ 10m, SACP on recovery

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month		Year		Ship		Cruise ID									
June		2004		Tully		2004-10									
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							
13	E12	0956	BE	CTD		67	51°54.988	134°30.038	3197						
1	1	1001	BO	1		1	51°54.997	134°30.007		210			D4		
	1	1004	EN				51°55.014	134°30.004							
13	E13	1041	OE	CTD		68	52°0.077	134°29.946	3187						
1	1	1045	BO	1		1	52°0.088	134°29.896		210			D4		
	1	1048	EN				52°0.091	134°29.886							
13	E14	1124	BE	CTD		69	52°05.66	134°30.06	3154				ST	✓	* —
↓		1128	BO				52°05.16	134°30.10		210					
		1131	EN				52°05.14	134°30.08							
	E15	1204	BE	CTD		70	52°10.01	134°29.92	3132				ST		trans. spike - ~45m on way down! weird! - OK on way up - like it hit something? nothing on CTD on recovery
		1210	BO				52°10.04	134°29.95		210					
		1212	EN				52°10.06	134°29.96							
	E16	1246	BE	CTD		71	52°15.03	134°29.93	3090				ST		
		1251	BO				52°15.04	134°29.92		210					
		1254	EN				52°15.04	134°29.94							
	E17	1329	BE	CTD		72	52°20.01	134°29.83	3081				ST		strong current
		1334	BO				52°19.95	134°29.83		210					
		1337	EN				52°19.94	134°29.68							

Cast type:

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(hex file, 004)
* restarted the mosaic June 13 0410 Local Time - was out by 10 min not just happened within the last 12 hours. Because I've been watching it closely. S.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month			Year			Ship			Cruise ID						
June			2004			Tudy			2004-1D						
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							
13	ED 18	1416	BE	CTD		73	52°25.02	134°29.92	3039				ST		
		1421	BO				52°24.99	134°29.92		210					
		1424	EN				52°24.98	134°29.93							
13	ED 19	1504	BE	CTD		74	52°30.001	134°29.948	3036				DY	✓	
		1507	BO				52°29.980	134°29.968		210					
		1511	EN				52°29.978	134°29.960							
13	ED 20	1549	BE	CTD		75	52°35.014	134°29.990	2897				DY		
		1553	BO				52°35.012	134°30.044		210					
		1557	EN				52°35.020	134°30.078							
13	ED 21	1637	BE	CTD		76	52°39.917	134°29.956	2922				DY	✓	
		1641	BO				52°39.991	134°29.954		210					
		1644	EN				52°40.003	134°29.951							
13	ED 22	1726	BE	CTD		77	52°45.017	134°29.944	2893				DY	✓	
		1731	BO				52°45.042	134°29.911		210					
		1734	EN				52°45.058	134°29.878							
13	ED 23	1814	BE	CTD		78	52°50.072	134°30.053	2814				DY	✓	
		1821	BO				52°50.048	134°30.966		210					
		1825	EN				52°50.063	134°29.882							

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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		Year		Ship		Cruise ID									
June		2004		Tally		2004-10									
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							
13	ED24	1902	BE	CTD		79	52 55.033	134 29.989	2810				DY	✓	Pump off - start - returned to surf.
1	1	1908	BO	1		1	52 55.038	134 29.936		210					
1	1	1910	EN	1		1	52 55.019	134 29.952							
13	ED25	1942	BE	CTD		80	52 59.959	134 30.014	2790				DY	✓	
1	1	1950	BO	1		1	52 59.958	134 30.025		210					
1	1	1953	EN	1		1	52 59.924	134 30.058							
13	ED26	2028	BE			81	53 5.034	134 29.918	2709				DY		
1	1	2031	BO			1	53 5.065	134 29.885		210					
1	1	2034	EN			1	53 5.080	134 29.849							
13	ED27	2108	BE	CTD		82	53 10.008	134 29.952	3718.7				DY		
1	1	2113	BO			1	53 9.997	134 30.053		210					
1	1	2117	EN			1	53 10.024	134 30.164							
14	ED27M	0121	BE	ROS		83	53 10.06	134 44.97	2777				ST	✓	PAR off - Rosette
		0150				1	53 09.89	134 44.61		2005	360-383	24			back in service.
		0217				1	53 09.64	134 43.83							calibration cast
14	ED28M	0430	BE	ROS		84	52 50.024	134 44.857	2924				MS		
		0500	BO				52 50.038	134 44.969		2005					
		0523	EN				52 49.738	134 44.743							

Cast type:

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

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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

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month		Year		Ship		Cruise ID								
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						
14	ED201700	0720	BE	ROS		85	52 35.01	134 44.93	3025					
1	1	0749	EN	1		1	52 35.04	134 44.96	2005	385	1			5m Alkaline
14	ED1710930	0930	BE	ROS		86	52 20.00	134 44.58	3090					
1	1	1004	BO	1		1	52 20.03	134 45.01	2005	386-403	21			
14	ED1711131	1131		NET		87	52 20.00	134 44.96	250					Range to 250-
	ED141331	1331		NET		88	52 05.03	134 44.94	3313	250				
14	ED141351	1351	BE	ROS		89	52 05.03	134 44.96	3313		407-430	24		
		1415	BO				52 04.87	134 44.99	2008					
		1536	EN				52 05.06	134 45.00						
14	ED141545	1545	-	DEF		-	52 04.98	134 44.91						Deploy Aug. 1388
14	ED111724	1724	BE	ROS		90	51 50.04	134 45.03						Long time of surf on down
			BO				51 50.382	134 45.299						Have Corp. Op. Problems again
		1904	EN				51 51.286	134 45.085					✓	
14	ED111920	1920	BO	NET		91	51 51.54	134 46.06	3287					
		1931	EN				51 51.63	134 46.16	250					

Cast type: USW = sea water loop

BOT = bottle cast, no CTD MOR = mooring

CTD = CTD without Rosette NET = net haul

ROS = Rosette plus CTD 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

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→ Lots of plankton! Salps, pteropods + "tana" of healthy big copepods (S.T) looking

DAILY LOG

Ocean Sciences and Productivity Division

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Month		Year		2004		Ship		P TULLY		Cruise ID		2004-10			
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							
14	ED8W	2215	B0	NET		92	51°35.50	134°46.22	3287	250			DP		250 m Bongo
	ED8W	2310	BE	RDS	US	93	51°35.06	134°45.35	3366		450 - 468	14	ST	✓	
		2338	B0				51°35.04	134°45.52		2008					
15		0044	EN				51°35.19	134°46.09							
15	ED5W	0237	BE	RDS	US	94	51°20.08	134°44.89	3395		469 - 487	19			
		0304	B0				51°20.04	134°44.004		2005					
		0407	EN				51°20.346	134°44.568							
15	ED5W	0440	NET	NET		95	51°20.76	134°44.789							Bongo 0-250
		0634													
15	ED 1W	0700	BE	RDS		96	50°59.96	134°44.990	2696		488	1			Sm Norkin #5
		0700	B0				51°0.10	134°44.76		2005					7 bottles lined OK
		0724	EN				51°0.19	134°44.51							LOOPS TAKEN
15	Loop 9	1100		Loop			51°10.74	133°39.44							Underway Loop 410
15	Loop 10	1505		Loop			51°23.320	132°18.602	2967						
15	SS1	1916	BE	RDS		97	51°29.969	131°39.999	2499						
		1939	B0				51°30.019	131°39.976		1500	489 - 510	22			
		1820	EN				51°30.036	131°40.050							

Cast type: USW = sea water loop bottle firing method: US = up / stop BE = beginning time of cast DE = deployment time

BOT = bottle cast, no CTD MOR = mooring UN = up / no stop BO = bottom time of cast MR = messenger release time

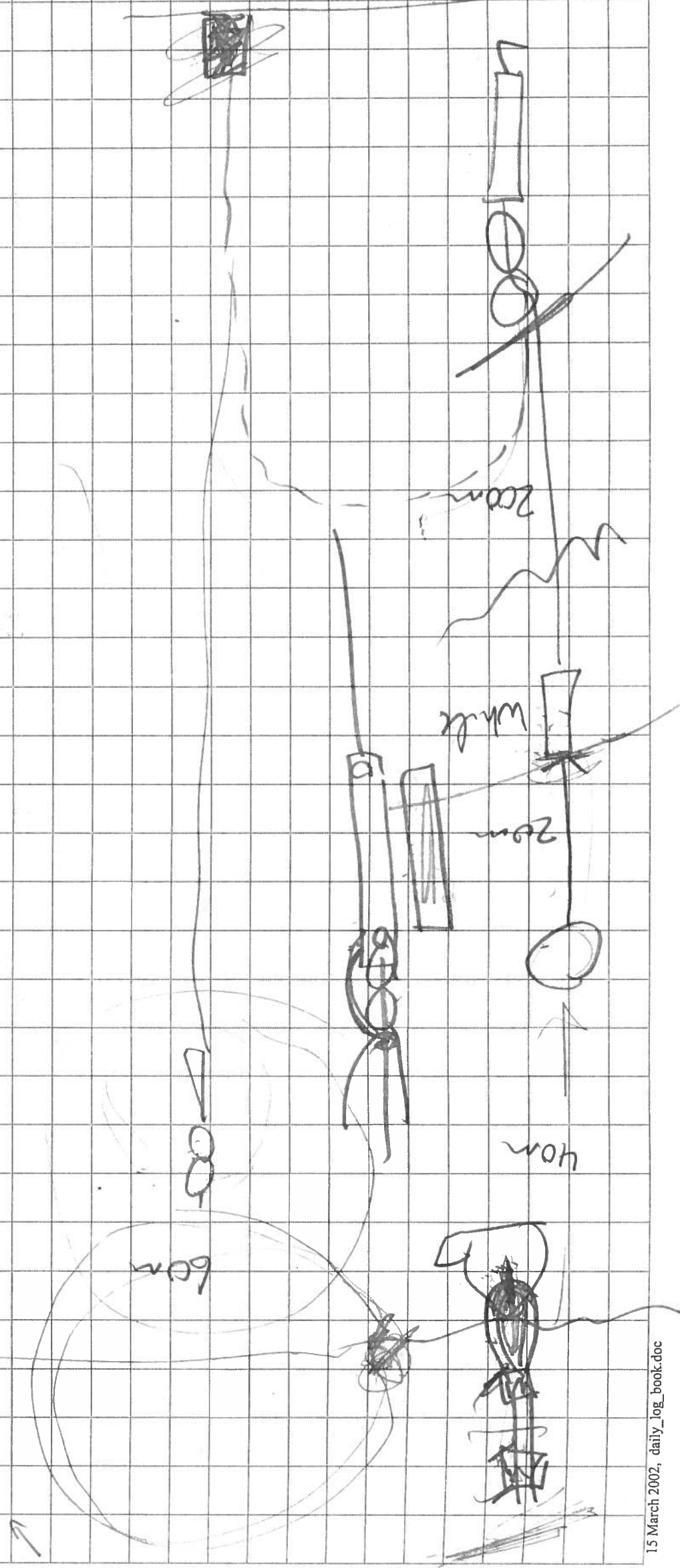
CTD = CTD without Rosette NET = net haul DN = down / no stop EN = end time of cast RE = recover mooring time

ROS = Rosette plus CTD DRF = driver

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

EDSW - Niskin #5 did not fire / close / trip on Rosette Event # 94 sample # 473

7 bottles	red	test	2.3.15	5	1	3
7 bottles	red	test	2.3.15	5	1	3



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>June</u>			Year <u>2004</u>			Ship <u>Tilly</u>			Cruise ID						
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	SS2	2150	BE	ROS		98	51 14.95	130 40.14	993						
		2219	BO			1	51 15.06	130 39.96		1987	511	1			5 m Distin
		2244	EN				51 15.03	130 39.91							
18	PARC1	1820		MOOR			50 57.4	129 59.6							PARC1 Recovery
16	SS3	0724	BE	ROS		99	51 44.64	128 20.74	297				BY		
		0728	BO			1	51 44.63	129 20.56		295	512-528	17			
		0749	EN				51 44.61	129 20.18							
16	SS4	0920	BE	ROS		100	51 21.02	129 0.00	242				DY		
		0926	BO				51 21.07	129 0.00		241	529	1			
		0930	EN				51 21.10	128 59.98							
	SS5	1133	BE	ROS	US	101	51 27.97	128 30.00	203				ST	✓	
		1136	BO				51 27.98	128 30.03		200	530-543	14	↓		
		1151	EN				51 27.96	128 29.98							
16	SS6	1356	BE	ROS	US	102	51 19.50	128 00.02	162						
		1400	BO				51 19.51	128 00.00		160	544	1			10 + 20 temp. sensors
		1404	EN				51 19.49	128 00.05							are drifting more + more

Cast type:

BOT = bottle cast, no CTD
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ROS = Rosette plus CTD

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MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:
US = up / stop
UN = up / no stop
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Time Code
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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				Year				Ship				Cruise ID					
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									
14	SS 7	1515	BE	ROS		103	51 24 809	127 47 533	123		545-555	11	MSW	✓	PAR ON		
		1519	BO				51 24 806	127 47 544		122							
		1534	EN				51 24 793	127 47 520									
16	RT 5	1818	BE	CH/R		104	51 40 721	127 19 826	203								
		1823	BO				51 40 723	127 19 829		200	556	1	MSW	✓			
		1829	EN				51 40 748	127 19 807									
16	RT 5	1830	BE	ROS		105	51 40 748	127 19 807	203		556	1					
		1836	BO				51 40 758	127 19 792		199							
		1840	EN				51 40 792	127 19 782									
16	RT 4	1918	BE	ROS		106	51 38.84	127 26.80	303								
1	1	1926	BO	1		1	51 38.92	127 26.86		301	557	1	MSW		San Niskin		
1	1	1932	EN	1		1	51 38 93	127 26.86									
16	RT 3	2036	BE	ROS		107	51 35 77	127 32.17	330		558	1					
1	1	2041	BO	1		1	51 35.73	127 32.16		328			MSW		San Niskin		
		2046	EN				51 35.70	127 32.14									

Cast type:

USW = sea water loop

US = up / stop

UN = up / no stop

DN = down / no stop

DE = deployment time

MR = messenger release time

RE = recover mooring time

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

BOT = bottle cast, no CTD

MOR = mooring

US = up / stop

BO = bottom time of cast

DE = deployment time

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CTD = CTD without Rosette

NET = net haul

EN = end time of cast

MR = messenger release time

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ROS = Rosette plus CTD

DRF = drifter

EN = end time of cast

RE = recover mooring time

SS7 - 2m bottle fired ~3 or 4m (altimeter died at this point)

Ris (event 104) - calibration cast without pump.

