

DAILY LOG BOOK

MISSION
NUMBER

2005-10

DATE:

From: 11 April to: 16 April

VESSEL:

VECTOR

PROJECT:

SOG - JdF

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

Captain: Brian Pennel First Officer: Mark Meister
Second Officer: Doug Murdock Third Officer: _____

Mission Participants / Agencies: TOS / PBS

Scientific Personnel:		Party Chief:	
Name	Watch	Cabin	Name
			Diane Mason

[illegible][illegible]

Data logging computer: PACOSAP_FSO2

CTD deck unit make: SEABIRD model: 11plus serial number: 0508

Data acquisition program: SEASAVE_WIN32_VER 5.32

Primary CTD

Make: SEABIRD model: 911 serial number: 0443

Primary temperature serial number: 2449

Primary conductivity serial number: 202

Secondary temperature serial number: 2968

Secondary conductivity serial number: 1729

Transmissometer:	WETLABS	Model:	CSTAR	s/n:	333 DR
Fluorometer: Model	SEAPoint	Cable gain:	10X	s/n:	2356
Oxygen sensor:	SEABIRD	Model:	SBE 43	s/n:	0766
PAR sensor:	BIOSPHERICAL	Model:		s/n:	4656
Other sensors:	BENTHOS	ATTIMETER		s/n:	1024
Other sensors:	BIOSPHERICAL	REFERENCE	PAR	s/n:	16504
Other sensors:				s/n:	
Other sensors:				s/n:	

Secondary CTD

Make: SEABIRD model: 911 serial number: 0585

Primary temperature serial number: _____

Primary conductivity serial number:

Secondary temperature serial number:

Secondary conductivity serial number:

Transmissometer: _____ Model: _____
s/n: _____

Fluorometer: Model _____ s/n: _____
Cable gain: _____ s/n: _____
P S or NO num? _____

Oxygen sensor: _____ s/n: _____
 Model: _____ P, S or NO pump? _____
 Cuts gain: _____ s/n: _____

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

Other sensors: _____ S/n: _____
 _____ model: _____ P/S or NO num? _____

Other sensors: _____
 s/n: _____

I, S or NO pump? _____
 s/n: _____

P, S or NO pump? _____
 s/n: _____

Other sensors: _____

_____ s/n: _____ I, S or NO pump? _____

_____ s/n: _____ P S or NO pump? _____

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

CTD calibration bottle location (height above CTD in metres): 2

Rosette Setup:
 Number of bottles: 24
 Manufacturer: CC (Ocean Test Equip., General Oceanics, IOS)
 Volume of bottles (litres): 10

Number of bottles: 24
 Manufacturer: GO (Ocean Test Equip., General Oceanics, IOS)
 Volume of bottles (litres): 10

Winches:

1. Make:	_____	model:	_____	serial #:	_____	used for:	_____
2. Make:	_____	model:	_____	serial #:	_____	used for:	_____
3. Make:	_____	model:	_____	serial #:	_____	used for:	_____
4. Make:	_____	model:	_____	serial #:	_____	used for:	_____
5. Make:	_____	model:	_____	serial #:	_____	used for:	_____
6. Make:	_____	model:	_____	serial #:	_____	used for:	_____
7. Make:	_____	model:	_____	serial #:	_____	used for:	_____

Comments: _____

Salinometer: make: _____ model: _____ serial number: _____

Comments: _____

Thermosalinograph System:

Program: _____ Version: _____

Sampling interval (seconds): _____

Fluorometer sensor serial number: _____

Comments: _____

ADCP Setup:

Computer time zone: _____

Sampling interval (sec): _____

Bin Length: (2^x): _____

Pulse Length: _____

Buffer (bytes): _____

Gyro Offset: _____

Comments: _____

User Exits: Name: _____ Exit points: _____

Name: _____ Exit points: _____

Name: _____ Exit points: _____

Work File: _____

Comments:

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month April				Year 2005			Ship Vector			Cruise ID 2005-10					
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							
04	Saanich	1938	BE	ROS		1	48 39 343	123 30 002	183						No Attimeter, Ship sounder not working.
	(SI)	1941	BO				48 39 364	123 29 952		172	1-2	2	M		Attimeter is a can file problem.
		1945	EN				48 39 364	123 29 952							
4	105	2321	BE	CTD		2	48 11.004	123 19.342	84						altimeter working
		2324	BO				48 11.08	123 19.487		75	N/A	N/A			Still no sounder.
		2326.5	EN				48 11.16	123 19.598							
4	ADCP	2364	BE	ROS		3	48 14.034	123 18.318	115		3-12	10	M	✓	
		2357	BO				48 14.053	123 18.474							
5		0008	EN				48 14 111	123 19 028		105					
5	104	0051	BE	CTD		4	48 19.874	123 18.191	87		N/A	N/A	M	✓	
		0056	BO				48 19.860	123 18.311		79					
		0059	EN				48 19.860	123 18.419							
5	67	123	BE	CTD		5	48 22.892	123 18.175	98		N/A	N/A	M	✓	
		0126	BO				48 22.937	123 18.294		90					
		129	EN				48 22.968	123 18.372							
5	66	206	BE	CTD		6	48 19.18	123 14.371	101		N/A	N/A			
		208	BO				48 19.135	123 14.521		90			M	✓	
		211	EN				48 19.102	123 14.638							

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

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MR = messenger release time
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Transmissometer to be cleaned for each cast, do not use Ammonia products

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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							
5	65	02:47	BE	ROS		7	48 15.892	123 9.882	123		13-22	10	✓	✓	
		02:50	BO				48 15.876	123 9.924	12	112					
		03:01	EN				48 15.870	123 10.034							
5	64	03:46	BE	CTD		8	48 13.061	123 5.822	107		N/A	N/A	✓		
		03:50	BO				48 13.085	123 5.834		95					
		3:54	EN				48 13.09	123 5.83							
5	63	5:29	BE	CTD		9	48 14.644	122 58.517	151		N/A	N/A	✓	✓	
		5:33	BO				48 14.676	122 58.526		149					
		5:36	EN				48 14.706	122 58.543							
5	62	06:37	BE	ROS		10	48 22.796	123 2.640	147		23-33	11	✓	✓	
		06:42	BO				48 22.800	123 2.678		143					
		06:51	EN				48 22.876	123 2.862							
5	61	08:18	BE			11	48 29.274	123 9.203	235				VF/DH	✓	
		08:25	BO	CTD			48 29.396	123 9.370		225	N/A	N/A			CTD DEPTH NOT WIRE
		08:32	EN				48 29.538	123 9.582							
5	60	09:19	BE	CTD		12	48 33.920	123 12.800	286		N/A	N/A	VF/DH	✓	
		09:28	BO				48 34.150	123 12.780		276					
		09:36	EN				48 34.466	123 12.760							

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stn 65 → no duplicates made for HPLC bottle 7 SF5 bottle 9, SF20 bottle 9
but original SF5 bottle 9 collected in a 600 ml bottle.

explanation:

- 330 ml SF5 (bottle 9) was filtered as straight chl. DT screwed up!
- 1 x 630 ml SF20 was filtered at $5\mu\text{m}$
- 1 x 630 ml SF20 was filtered at $20\mu\text{m}$

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>APRIL</i>				Year <i>2005</i>			Ship <i>VECTOR</i>				Cruise ID <i>2005-10</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							
5	59	1035	BE	ROS	ON UP WAIT 20 SEC	13	48 37.794	123 14.641	230		34-47	14	VF/DH	✓	
		1042	BO				48 37.877	123 14.767		220					
		1102	EN				48 38.032	123 15.078							
5	58	1114	BE	CTD		14	48 43.019	123 14.320	340		N/A	N/A	✓		
		1124	BO				48 43.032	123 14.302		330					
		1133	EN				48 43.212	123 14.174							
5	57	1204	BE	CTD		15	48 44.020	123 8.101	160		N/A	N/A	✓		
		1208	BO				48.40.053	123 8.048							
		1212	EN				48 44.092	123 7.964							
5	56	1246	BE	ROS		16	48 46.376	123 1.624	213		48-61	14	✓		
		1251	BO				48 46.373	123 1.660		205					
		1306	EN				48 46.375	123 1.700							
5	47	1429	BE	CTD		17	48 49.306	123 6.060	186		N/A	N/A	✓		
		1434	BO				48 49.296	123 5.989		177					
		1439	EN				48 49.272	123 5.844							
5	48	1506	BE	CTD		18	48 51.688	123 3.124	227		N/A	N/A	1.12	✓	
		1512	BO				48 51.708	123 3.120		215					
		1518	EN				48 51.684	123 3.115							

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Month <i>APR</i>				Year <i>2005</i>			Ship <i>Vector</i>				Cruise ID <i>2005-10</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							
5	49	15:48	RE	CTD		19	48 54.965	122 59.633	132		N/A	N/A	L/L	✓	
		15:51	BO				48 54.956	122 59.594		125					
		15:55	EN				48 54.941	122 59.540							
5	44	16:30	RE	CTD		20	48 56.731	123 5.969	119		N/A	N/A	L/L	✓	
		16:33	BO				48 56.707	123 5.903		110					
		16:37	EN				48 56.688	123 5.819							
5	45	17:29	RE	CTD		21	48 53.854	123 8.341	127		N/A	N/A	L/L	✓	
		17:32	BO				48 53.820	123 8.306		115					
		17:36	EN				48 53.778	123 8.258							
5	46	18:02	RE	ROS		22	48 51.431	123 10.777	177		62-73	12	L/L	✓	*radiometer
		18:07	BO				48 51.415	123 10.673		174					
		18:17	EN				48 51.243	123 10.522							
5	43	21:13	RE	CTD		23	48 0.330	123 29.994	207		N/A	N/A	VF/DM	✓	
		21:18	BO				48 0.354	123 29.941		204					
		21:23	EN				48 0.354	123 29.891							
5	42	21:50	RE	ROS		24	48 1.902	123 25.907	318		74-89	16	VF/DM	✓	
		21:58	BO				48 1.854	123 25.789		312			DT		
		22:10	EN				48 1.865	123 25.577							

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Time - off by 1 hr from NMEA data.

→ Station 42 - Event 24 Time Corrected Apr. 5 2150 UTC

→ STN 42 - Cast 24 Spigot Broken Bottle # 9 - sample 082 - 75m

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month APRIL				Year 2005			Ship VECTOR			Cruise ID 2005-10					
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	41	2251	BE	CTD		25	48 1.859	123 21.976	224		N/A	N/A	VF/DMx2	✓	
		2302	BO				48 3.608	123 21.943		216			DT		
		2308	EN				48 3.529	123 22.034							
5	37	2311	BE	CTD		26	49 13.669	123 20.669	215		N/A	N/A	VF/DMx2	✓	
		2316	BO				49 13.628	123 20.458		205					
		2322	EN				49 13.716	123 20.441							
6	38	0034	BE	CTD		27	49 12.022	123 26.243	306		N/A	N/A	DT	✓	
		0040	BO				49 12.026	123 26.153		195					
		0046	EN				49 12.029	123 26.076							
6	39	1133	BE	ROS		28	49 9.758	123 32.702	374		90-106	17	DT		
		1132	BO				49 9.982	123 32.491		365					
		1145	EN				49 10.171	123 32.336							
6	40	259	BE	CTD		29	49 8.718	123 36.594	180		N/A	N/A	DT	✓	
		303	BO				49 8.792	123 36.502							
		308	EN				49 8.920	123 36.469							
6	26	0426	BE	CTD		30	49 14.404	123 50.617	266		N/A	N/A	DT	✓	
		0432	BO				49 14.473	123 50.452		255					
		0438	EN				49 14.512	123 50.346							

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Month <i>April</i>				Year <i>2005</i>			Ship <i>Vector</i>			Cruise ID <i>2005-10</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							
<i>6</i>	<i>27</i>	<i>05:22</i>	<i>BE</i>	<i>ROS</i>		<i>31</i>	<i>49 19.067</i>	<i>123 45.011</i>	<i>350</i>		<i>107-122</i>	<i>16</i>	<i>LL</i>	✓	
		<i>05:31</i>	<i>BO</i>				<i>49 18.992</i>	<i>123 47.947</i>		<i>346</i>					
		<i>05:45</i>	<i>EN</i>				<i>49 18.798</i>	<i>123 47.794</i>							
<i>6</i>	<i>28</i>	<i>0748</i>	<i>BE</i>	<i>CTD</i>		<i>32</i>	<i>49 24.143</i>	<i>123 44.986</i>	<i>135</i>		<i>N/A</i>	<i>N/A</i>	<i>VF/DH</i>	✓	
		<i>0751</i>	<i>BO</i>				<i>49 24.146</i>	<i>123 44.917</i>		<i>125</i>					<i>(STORMY)</i>
		<i>0755</i>	<i>EN</i>				<i>49 24.154</i>	<i>123 44.826</i>							
<i>6</i>	<i>25</i>	<i>1001</i>	<i>BE</i>	<i>CTD</i>		<i>33</i>	<i>49 27.724</i>	<i>124 7.160</i>	<i>315</i>		<i>N/A</i>	<i>N/A</i>	<i>VF/DH</i>	✓	<i>syringes left off</i>
		<i>1009</i>	<i>BO</i>				<i>49 27.757</i>	<i>124 6.980</i>		<i>305</i>					<i>CTD</i>
		<i>1017</i>	<i>EN</i>				<i>49 27.799</i>	<i>124 6.812</i>							
<i>6</i>	<i>19</i>	<i>1438</i>	<i>BE</i>	<i>CTD</i>		<i>34</i>	<i>50 1 208</i>	<i>124 52 810</i>	<i>278</i>		<i>N/A</i>	<i>N/A</i>	<i>TH</i>	✓	<i>transducer</i>
		<i>1446</i>	<i>BO</i>				<i>50 1 198</i>	<i>124 52 598</i>		<i>274</i>					
		<i>1452</i>	<i>EN</i>				<i>50 1 164</i>	<i>124 52 418</i>							
<i>6</i>	<i>18</i>	<i>18:06</i>	<i>BE</i>	<i>CTD</i>		<i>35</i>	<i>49 59.134</i>	<i>124 58.868</i>	<i>150</i>		<i>N/A</i>	<i>N/A</i>		✓	
		<i>18:10</i>	<i>BO</i>				<i>49 59.095</i>	<i>124 58.872</i>		<i>149</i>					
		<i>18:15</i>	<i>EN</i>				<i>49 59.059</i>	<i>124 58.892</i>							
<i>6</i>	<i>17</i>	<i>18:38</i>	<i>BE</i>	<i>CTD</i>		<i>36</i>	<i>49 58.75</i>	<i>125 4.26</i>	<i>263</i>		<i>N/A</i>	<i>N/A</i>		✓	
		<i>18:45</i>	<i>BO</i>				<i>49 58.63</i>	<i>125 4.16</i>		<i>260</i>					
		<i>18:50</i>	<i>EN</i>				<i>49 58.52</i>	<i>125 4.067</i>							

Cast type:

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→ Time incorrect again between NMEA Data & UTC computer time - as before

DAILY LOG

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Month April				Year 2005			Ship Vector				Cruise ID 2005-10				
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							
6	16	2102	BE	ROS		37	49 57.648	125 8.647	156		123-133	11	VF/DM/DA	✓	
		2106	BO				49 57.594	125 8.528		155					
		2113	EN				49 57.528	125 8.362							
6	16	1357	-	RADIOMETER		38	49 58.031	125 7.617	156		-	-	MQ/DT	-	
6	21	2307	BE	CTD		39	49 1.83	125 13.49	71		N/A	N/A	VF/DM	✓	
		2309	BO				49 1.805	125 13.471							
		2311	EN				49 1.801	125 13.474							
6	15	2326	BE	CTD		40	49 51.643	125 1.648	125		N/A	N/A	VF/DM	✓	
		2329	BO				49 51.654	125 1.624							
		2332	EN				49 51.672	125 1.609							
7	14	00:50	EN	ROS		41	49 52.985	124 59.586	316		134-149	16	YH	✓	+radiometer
		00:58	BO				49 53.011	124 59.651		305					
		01:11	EN				49 53.074	124 59.767							
7	13	119	BE	CTD		42	49 55.219	124 55.267	234					✓	
		135	BO				49 55.206	124 55.405							
		130	EN				49 55.236	124 55.523							
7	20	04:20	BE	CTD		43	49 47.218	124 32.312	305		N/A		LIL	✓	
		04:27	BO				49 47.191	124 32.329	295						
		04:34	EN				49 47.167	124 32.404							

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- clock still 1hr offset (-1hr. on NMEA)

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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							
7	12	0533	BE	ROS		44	49 43.626	124 40.872	356		150-165	16	L/K	✓	
		0542	BO				49 43.586	124 40.938		352					
		0556	EN				49 43.506	124 41.051							
7	11	0659	BE	LTD		45	49 42.320	124 43.484	298		N/A	N/A	L/K		
		0706	BO				49 42.341	124 43.657		290					
		0713	EN				49 42.342	124 43.753							
7	10	0734	BE	CTD		46	49 40.687	124 47.264	94		N/A	N/A	L/K		transmissometer → 0
		0736	BO				49 40.667	124 47.268		81					@ 81m so stopped
		0738	EN				49 40.654	124 47.269							early -
7	9	0828	BE	ROS		47	49 35.532	124 38.279	166		166-177	12	VF/DH	✓	
		0833	BO				49 35.616	124 38.240		158			MQ		
		0842	EN				49 35.714	124 38.351							
7	8	0943	BE	CTD		48	49 39.289	124 32.881	337		N/A	N/A	VF/DH	✓	
		0952	BO				49 39.374	124 32.705		332			MQ		
		1001	EN				49 39.460	124 32.662							
7	7	1052	BE	CTD		49	49 34.420	124 24.211	352		N/A	N/A	VF/DH	✓	
		1101	BO				49 34.399	124 24.086		345					
		1110	EN				49 34.331	124 27.007							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>APRIL</i>				Year <i>2005</i>				Ship <i>VECTOR</i>				Cruise ID <i>2005-10</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							
<i>7</i>	<i>6</i>	<i>1144</i>	<i>BE</i>	<i>ROS</i>		<i>50</i>	<i>49 30.646</i>	<i>124 27.763</i>	<i>193</i>		<i>178-190</i>	<i>13</i>	<i>VF/DH</i>	<i>✓</i>	
		<i>1149</i>	<i>BO</i>				<i>49 30.629</i>	<i>124 27.604</i>		<i>185</i>					
		<i>1159</i>	<i>EN</i>				<i>49 30.588</i>	<i>124 27.395</i>							
<i>7</i>	<i>5</i>	<i>1300</i>	<i>BE</i>	<i>CTD</i>		<i>51</i>	<i>49 27.373</i>	<i>124 30.757</i>	<i>317</i>		<i>N/A</i>	<i>N/A</i>	<i>W</i>		
		<i>1308</i>	<i>BO</i>				<i>49 27.282</i>	<i>124 30.754</i>		<i>305</i>					
		<i>1318</i>	<i>EN</i>				<i>49 27.316</i>	<i>124 30.752</i>							
<i>7</i>	<i>4</i>	<i>1401</i>	<i>BE</i>	<i>CTD</i>		<i>52</i>	<i>49 24.512</i>	<i>124 22.162</i>	<i>343</i>		<i>N/A</i>	<i>N/A</i>	<i>W</i>		
		<i>1410</i>	<i>BO</i>				<i>49 24.554</i>	<i>124 22.255</i>		<i>335</i>					
		<i>1418</i>	<i>EN</i>				<i>49 24.529</i>	<i>124 22.213</i>			<i>N/A</i>	<i>N/A</i>			
<i>7</i>	<i>3</i>	<i>1448</i>	<i>BE</i>	<i>ROS</i>		<i>53</i>	<i>49 26.626</i>	<i>124 20.158</i>	<i>324</i>						
		<i>1456</i>	<i>BO</i>				<i>49 26.707</i>	<i>124 20.125</i>		<i>315</i>	<i>191-206</i>	<i>16</i>	<i>W</i>		
		<i>1507</i>	<i>EN</i>				<i>49 26.756</i>	<i>124 20.146</i>							
<i>7</i>	<i>2</i>	<i>15:57</i>	<i>BE</i>	<i>ROS</i>		<i>54</i>	<i>49 24.04</i>	<i>124 9.343</i>	<i>290</i>		<i>207-221</i>	<i>15</i>	<i>DM/WW/RT</i>		
		<i>16:04</i>	<i>BO</i>				<i>49 23.934</i>	<i>124 9.486</i>		<i>287</i>					
		<i>16:17</i>	<i>EN</i>				<i>49 23.849</i>	<i>124 9.590</i>							
<i>7</i>	<i>1</i>	<i>16:47</i>	<i>BE</i>	<i>CTD</i>		<i>55</i>	<i>49 20.250</i>	<i>124 12.125</i>	<i>243</i>		<i>N/A</i>	<i>N/A</i>	<i>WW</i>	<i>✓</i>	
		<i>16:54</i>	<i>BO</i>				<i>49 20.190</i>	<i>124 12.127</i>		<i>235</i>					
		<i>17:00</i>	<i>EN</i>				<i>49 20.146</i>	<i>124 12.110</i>							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month April				Year 2005			Ship Vector				Cruise ID 2005-10				
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							
8	103	6:59	BE	CTD		56	48 32.894	124 42.996	124		N/A	N/A	WW/DT	✓	some swell.
		7:02	BO				48 32.874	124 43.043		121					no rain
		7:05	EN				48 32.857	124 43.093							
8	102	7:33	BE	ROS		57	48 30.011	124 43.972	256		222-235	14	VF/DM	✓	Bottle 7 - no water
		7:40	BO				48 30.011	124 44.093		250					
		7:50	EN				48 30.007	124 44.328							
8	101	8:41	BE	CTD		58	48 25.458	124 45.256	240		N/A	N/A	VF/DM	✓	
		8:47	BO				48 25.502	124 45.374		230					
		8:53	EN				48 25.566	124 45.458							
8	74	09:40	BE	CTD		59	48 25.008	124 35.635	179		N/A	N/A	VF/DM	✓	BE/BO time cor.
		09:46	BO				48 24.964	124 35.722		176					
		09:52	EN				48 24.913	124 35.707							
8	75	10:34	BE	ROS		60	48 28.183	124 32.756	222		236-249	14	VF/DM	✓	
		10:40	BO				48 28.154	124 32.875		215					
		10:51	EN				48 28.105	124 32.982							
8	76	11:41	BE	CTD		61	48 31.386	124 29.954	88		N/A	N/A	VF/DA	✓	
		11:45	BO				48 31.267	124 29.995		76					
		11:47	EN				48 31.193	124 30.018							
Cast type: RCT = bottle cast, no CTD USW = sea water loop bottle firing method: Time Code															

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Month <i>April</i>				Year <i>2005</i>				Ship <i>VECTOR</i>				Cruise ID <i>2005-10</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							
8	71	1253	BE	CTD		62	48 22 196	123 59 371	107						
		1256	BO				48 22 187	123 59 340		95					
		1259	EN				48 22 182	123 58 311							
8	72	1337	BE	ROS		63	48 18 631	124 3 917	185		250-262	13			radiometer
		1342	BO				48 18 618	124 3 798		175					
		1350	EN				48 18 644	124 3 679							
8	73	1452	BE	CTD		64	48 14 980	124 6 637	159		N/A				
		1457	BO				48 14 960	124 6 560		150					
		1501	EN				48 14 946	124 6 521							
8	68	1853	BE	CTD		65	48 12.150	123 42.910	137		N/A				radiometer
		18:56	BO				48 12.150	123 42 864		126					
		19:00	EN				48 12.139	123 42.862							
8	69	19:35	BE	ROS		66	48 15 660	123 43 153	178		263-274				radiometer
		19:41	BO				48 15 760	123 43 166		175					
		19:50	EN				48 15 916	123 43 186							
8	70	20:34	BE	CTD		67	48 19.250	123 43.006	147		N/A				radiometer
		20:37	BO				48 19.255	123 43 002		135					Syringes left off
		20:39	EN				48 19.261	123 42.944							CTD.

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