

DAILY LOG BOOK

MISSION
NUMBER

2002-36

DATE:

From: 9-Dec-2002 to: 16-Dec-2002

VESSEL:

CCGS VECTOR

PROJECT:

ACRDP: Broughton Oceanography &
Circulation

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

Captain: Snider First Officer: Steve Kennedy
Second Officer: Mark Third Officer: _____

Mission Participants / Agencies: IOS

Scientific Personnel: Party Chief: Dario Stucchi

Name	Watch	Cabin	Name	Watch	Cabin
<u>Dario Stucchi</u>	_____	_____	_____	_____	_____
<u>Darren Tuele</u>	_____	_____	_____	_____	_____
<u>Andrew Lee</u>	_____	_____	_____	_____	_____
<u>Sheila Toews</u>	_____	_____	_____	_____	_____
<u>Melanie Quenneville</u>	_____	_____	_____	_____	_____
<u>Nail Sutherland</u>	_____	_____	_____	_____	_____
<u>Denny Sinnott</u>	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of Mission:

Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Data logging computer: F303 FS01

Data acquisition program: Seasave Win32, Ver. 5.264d

CTD deck unit make: Seabird model: 11plus serial number: 0619

Primary CTD

Make: Seabird model: 911plus serial number: 0443-0550

Primary temperature serial number: 2968

Primary conductivity serial number: 2173

Secondary temperature serial number: 2038

Secondary conductivity serial number: 1729

Transmissometer: Wetlabs Model: CStar s/n: 499DR

Fluorometer: Model Scapint Chlorophyll Cable gain: 10X s/n: 2229 P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 0047 P, S or NO pump?

PAR sensor: Biospherical Underwater Model: 4355 s/n: 4615

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

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

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

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

Secondary CTD

Make: Seabird model: 911 plus serial number: 0585

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 2106

Secondary conductivity serial number: 1764

Transmissometer: Wetlabs Model: CStar s/n: 333 DR

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

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

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

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

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

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

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

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

Rosette Setup:

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

Winches:

1. Make:	_____	model:	_____	serial #:	_____	used for:	CTD winch & induction
2. Make:	_____	model:	_____	serial #:	_____	used for:	Drugging winch
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: N/A model: _____ serial number: _____
Comments: _____

Thermosalinograph System:

Program: N/A Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____
Comments: _____

ADCP Setup:

Computer time zone: N/A User Exits: Name: _____ Exit points: _____
Sampling interval (sec): _____ Name: _____ Exit points: _____
Bin Length: (2^x): _____ Name: _____ Exit points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____
Comments: _____

Comments: _____

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month December					Year 2002			Ship VECTOR				Cruise ID 2002-36			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments	
						Latitude	Longitude								
11	Kn ADCP		MOR	RE		50° 40.253	126° 02.114							~1600-1900 tried releasing, said it released but it did not come up.	
11	BIS	0813	ROS	BE	001	50° 36.04	126° 43.66	147	138	1-10	10	DS			
		0818		BO		36.08	43.86								
		0831		EN		36.19	44.33								
11	KnO	0935	ROS	BE	002	50° 38.32	126° 35.07								
		0938		BO		50° 38.32	126° 35.07	63		11-17		ST.			
		0944		EN		50° 38.32	126° 35.06		53						
	KN1	1036		BE	003	50° 38.09	126° 25.35	257		18-30		ST.			
		1043		BO		50° 38.05	126° 25.38		250						
		1057		EN		50° 38.08	126° 25.32								
	KN2	1203		BE	004	50° 39.27	126° 11.01	183						Oxygen values suspiciously consistent?	
		1208		BO		50° 39.29	126° 11.17		157	31-44		ST.			
		1220		EN		50° 39.44	126° 11.15								
	Tr C1	1315		BE	005	50° 43.63	126° 10.85								
		1321		BO		50° 43.66	126° 10.88	286		42-55					
				EN					263						

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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

22 March 2002

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Tuesday

Dec 10 2002

1600⁰⁰ at Knight Inlet ADCP mooring

sent enable code to # 528 BCE

ranged 96m 120m 112m

16:07 rel code ACFG - Sounded good, nothing surfaced
continue to range, move ship range until 1700.

1740 After dinner back to original site

without enable code sent to ADCP release did Xpond.

rec'd 350m range Assume it's WASP mooring

enabled & ranged on ADCP mooring 251, 255, 255 same as before, has it moved

1745 Send re arm code to 528 CDFG, range 261, 261, 260

1750 head to Port McNeill pick up divers

1500h - checked all calibration coefficients - there was one number off in the
oxygen calibration file - the voltage offset. I don't know if this was
the problem last night or not. May need to clean the probe. (S.T.)

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>Dec</i>					Year <i>2002</i>			Ship <i>VECTOR</i>				Cruise ID <i>2002-36</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
<i>11</i>	<i>WASP</i>	<i>1607</i>	<i>MOR</i>	<i>RE</i>										<i>on surface at 1608</i>
<i>11</i>	<i>ADCP</i>		<i>MOR</i>	<i>RE?</i>										<i>ranged on ADCP + determined it was in deployed position</i> <i>- sent release command at 1650 but did surface although it signaled a release.</i> <i>- ranged + interrogated + released again but no luck</i> <i>- regained bottom + left side at 1735 UTC</i>
<i>11</i>	<i>TG-Kwesi</i>	<i>2109</i>	<i>MOR</i>	<i>RE</i>		<i>50° 51.882</i>	<i>126° 14.963</i>			<i>Gauge # 109</i>				<i>Gauge disturbed at 1309 PST</i>
<i>11</i>	<i>TG-Kwesi</i>	<i>2130</i>	<i>MOR</i>	<i>DE</i>	<i>2130</i>	<i>50° 51.882</i>	<i>126° 14.963</i>			<i>Gauge # 108</i>				<i>Gauge deployed at 1330 PST</i> <i>- mooring surfaced at 1438 PST</i>
<i>11</i>	<i>TC-03</i>	<i>2238</i>	<i>MOR</i>	<i>RE</i>										
<i>12</i>	<i>FS-06</i>	<i>0025</i>	<i>MOR</i>	<i>RE</i>										<i>- initially would not release because we were using the wrong release code</i> <i>- 1625 PST sent correct release code</i>
<i>12</i>	<i>Fe S</i>	<i>0359</i>	<i>ROS</i>	<i>BE</i>	<i>006</i>	<i>50° 47.00</i>	<i>126° 36.72</i>	<i>334</i>	<i>328</i>	<i>56-70</i>	<i>15</i>			<i>- transmissometer reading low</i> <i>- DU reading high</i> <i>- missed NUTS 13 14 15</i>
		<i>0409</i>		<i>BO</i>		<i>47.02</i>	<i>36.72</i>							
		<i>0427</i>		<i>EN</i>		<i>47.02</i>	<i>36.78</i>							
<i>12</i>	<i>PPI</i>	<i>0518</i>	<i>ROS</i>	<i>BE</i>	<i>007</i>	<i>50° 48.78</i>	<i>126° 31.46</i>	<i>151</i>	<i>142</i>	<i>71-80</i>				
		<i>0522</i>		<i>BO</i>		<i>48.80</i>	<i>31.44</i>							
		<i>0534</i>		<i>EN</i>		<i>48.78</i>	<i>31.29</i>							

Cast type:

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

USW = sea water loop
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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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DE = deployment time
MR = messenger release time
RE = recover mooring time

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

22 March 2002
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TC-4



#3005 30'



Pinger #6571 27KHz

in water

30m



S4 #0755

2:58 PM PST



SS-28
#2569

90m



RCM #8830
Vane #415

3:00 PM



SS-28
#2568

150m



RCM #8305
Vane #452

3:01 PM



DC
#36221

210m



RCM #432
Vane #432

3:03 PM



48432
45190
36103

Pinger
#8647
27KHz

Acoustic Release #459 c.d. ABEG
8KHz reply

3:04



3 wheels

3:06 PM anchor dropped

Depth: 232-235m. (lab)

3:17

3:18 PM

Cont float went into water
submerged

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>DECEMBER</u>					Year <u>2002</u>			Ship <u>Vector</u>				Cruise ID <u>2002-36</u>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
<u>12</u>	<u>WP</u>	<u>0801</u>	<u>ROS</u>	<u>BE</u>	<u>008</u>	<u>50° 50.76</u>	<u>126° 56.48</u>	<u>181</u>		<u>81-91</u>	<u>11</u>	<u>ST</u>		<u>See note opposite → *</u> <u>changed config</u>
		<u>0804</u>		<u>BO</u>		<u>50° 50.49</u>	<u>126° 56.50</u>		<u>172</u>					
		<u>0815</u>		<u>EN</u>		<u>50° 50.79</u>	<u>126° 56.54</u>							
	<u>SC</u>	<u>0919</u>	<u>ROS</u>	<u>BE</u>	<u>009</u>	<u>50° 53.46</u>	<u>126° 45.73</u>			<u>92-104</u>	<u>13</u>	<u>ST</u>		<u>computer's</u> <u>oxygen values look</u>
		<u>0924</u>		<u>BO</u>		<u>50° 53.50</u>	<u>126° 45.80</u>	<u>233</u>						<u>much more</u>
		<u>0937</u>		<u>EN</u>		<u>50° 53.42</u>	<u>126° 46.05</u>		<u>175</u>					<u>reasonable (ST)</u>
	<u>Kin 0</u>	<u>1026</u>	<u>ROS</u>	<u>BE</u>	<u>010</u>	<u>50° 51.68</u>	<u>126° 37.17</u>			<u>105-119</u>	<u>15</u>	<u>ST</u>		
		<u>1035</u>		<u>BO</u>		<u>50° 51.72</u>	<u>126° 37.24</u>	<u>394</u>						
		<u>1055</u>		<u>EN</u>		<u>50° 51.74</u>	<u>126° 37.14</u>		<u>395</u>					
	<u>Kin 1.5</u>	<u>1149</u>	<u>ROS</u>	<u>BE</u>	<u>011</u>	<u>50° 56.20</u>	<u>126° 28.94</u>					<u>ST</u>		
		<u>1153</u>		<u>BO</u>		<u>50° 56.21</u>	<u>126° 28.87</u>	<u>477</u>		<u>120-135</u>				
		<u>1220</u>		<u>EN</u>		<u>50° 56.17</u>	<u>126° 28.95</u>		<u>474</u>					
	<u>Kin 3.0</u>	<u>1332</u>	<u>ROS</u>	<u>BE</u>	<u>012</u>	<u>50° 54.95</u>	<u>126° 14.70</u>					<u>ST</u>	✓	
		<u>1339</u>		<u>BO</u>		<u>50° 54.88</u>	<u>126° 14.77</u>	<u>199</u>		<u>136-148</u>				
		<u>1350</u>		<u>EN</u>		<u>50° 54.90</u>	<u>126° 14.67</u>							
	<u>TC-04</u>	<u>23:18</u>	<u>MOR</u>	<u>DE</u>		<u>50° 49.298</u>	<u>126° 23.655</u>	<u>232-235</u>						<u>Anchor released at 15:16 PST</u> <u>Submerged at 15:18 PST</u>
<u>12</u>	<u>TG-King</u>	<u>1900</u>	<u>MOR</u>	<u>RE</u>		<u>50° 54.523</u>	<u>126° 11.967</u>	<u>26'</u>		<u>- Gauge # 101 moved at 1100 PST</u> <u>- pinger not working, took divers 2 hours to find</u>				
<u>12</u>	<u>TG-King</u>	<u>1923</u>	<u>MOR</u>	<u>DE</u>		<u>50° 54.523</u>	<u>126° 11.967</u>	<u>26'</u>		<u>- Gauge # 109 in position at 1123 PST</u> <u>- new pinger installed</u>				

Cast type: USW = sea water loop • bottle firing method: • Time Code

BOT = bottle cast, no CTD MOR = mooring • US = up / stop • BE = beginning time of cast DE = deployment time

CTD = CTD without Rosette NET = net haul • UN = up / no stop • BO = bottom time of cast MR = messenger release time

ROS = Rosette plus CTD DRF = drifter • DN = down / no stop • EN = end of cast time RE = recover mooring time

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

22 March 2002
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Voltage

Additional comments

Fluo #0
Tx #2 448DR 05-12-02 $M = 19.0282$ $B = -1.0856$.25m path length.

DO #4 0047 21-Aug-02 $SOC = 4.0950E-001$, $BIC = 0.0000$, $V_{OFF} = -0.5915$
 $TCOR = 0.001200$, $PCOR = 1.35E-004$
 $TAU = 0.00$

X Changed con file because the voltage channels for DO + transmitter were reversed,
DO was channel #4 + Transmitter was channel #2 they are now reversed.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>Dec</i>					Year <i>2002</i>			Ship <i>Vector</i>			Cruise ID <i>2002-36</i>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
13	MIDO	01:50	ROS	BE	013	50°39.42	126°39.66	49		149-156	8	ST		} bottles not opened! had to redo!
		0152		BO		50°39.42	126°39.67							
		0157		EN		50°39.42	126°39.71							
	MIDO	0206	ROS	BE	013	50°39.42	126°39.66	49						Friday the 13th, 13th cast... hmmm
		0207		BO		50°39.41	126°39.68			(149-156)				
		0212		EN		50°39.42	126°39.66							
13	MI-00	0154	MOR	RE										1754PST disturbed YSI probe 929AA
13	QCSI	0627	ROS	BE	014	50°40.03	126°46.39	162						thoroughly but cleaned; only still reading 91% transmittance rather than 100% (ST.)
		0630		BO		50°40.07	126°46.45			157-166	10	ST	✓	
		0647		EN		50°40.07	126°46.41							
	QCS1.5	0730	ROS	BE	015	50°42.88	126°55.61							-put in a fluorometer offset of -0.37 in config file to see if it brings computer value closer to zero. ST.
		0732		BO		50°42.88	126°55.61	144		167-176	10			
		0095		EN		50°42.96	126°55.66		137					
	QCS2.5	0829	ROS	BE	016	50°42.48	127°05.28							removed PAR
		0834		BO		50°42.46	127°05.24	198		177-188	12			
		0846		EN		50°42.49	127°05.87		196					
	QCS3.0	0933	ROS	BE	017	50°43.75	127°15.03							(seemed to work.) 1095 - 10 it.
		0938		BO		50°43.72	127°15.12	211						
		0950		EN		50°43.67	127°14.76							

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bottle firing method:
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Additional comments

- changed fluorometer offset back to 0.000 right away. (the way it was)
- the time went wonky - ^{minutes} ~~were~~ going up by seconds... weird.
- after the cast (015) was over, I re-powered up + the time went back to normal. Must have been my mucking around. S.T.
- by the way, ~ 1600h ^{LOCAL TIME} today (Dec 12) we saw tons of Pacific White sided dolphins. Must have been close to 100! They were everywhere. Quite a spectacular sight.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month					Year			Ship			Cruise ID			
Dec					2002			VECTOR			2002-36			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
13	QCS2	1046	ROS	BE	18	50°46'58	127°02'31	220						
		1051		BO		50°46'69	127°02'22		213	202-214	13	ST		
		1103		EN		50°46'78	127°02'00							
13	Knight-ADCP	1728	MOR	RE		Dragging for mooring,		Top floats + ADCP surfaced,						First drag 0830-0930 Second drag 0930-1100
	"	1730	MOR	RE		Second drag : No results		acoustic release + hard hats still in place						Top float submerged at 1542 PST -strong winds
13	FS-07	2342	MOR	DE		50°47'084	126°36'690	333(146)						
14	PE-DO	0454	ROS	BE	019	50°40'24	126°29'04							
		0456		BO		50°40'24	126°29'04		47	215-223				
		0501		EN		50°40'31	126°29'00							
14	PE-DO	04:46	MOR	RE		YSI DO probe # 929AB		disturbed at 8:46 PM. (PST)						
14	CC1	0610	ROS	BE		50°36'32	126°21'43			224-232				
		0613		BO	020	50°36'34	126°21'44	117m	111					
		0621		EN		50°36'29	126°21'44							
14	CC2	0702	ROS	BE		50°34'23	126°29'35	67		233-239				
		0704		BO	021	50°34'24	126°29'33							rinsed off CTD
		0709		EN		50°34'28	126°29'31							fresh H2O

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22 March 2002
Daily_log_book.doc

Dec 13, 2002. Additional comments

Additional comments

Depth		Additional Comments	
		#2591	In water
		#3016	
30 m		Pinger #822 RCM# 6101 Vane #420	3:11 PM PST
50 m		ADCP #1820	3:12 PM
90 m		#3012 RCM# 3695 Vane #411	3:13 PM
150 m		#3014 RCM# 7357 Vane #434	3:14 PM
210 m		47340 45183 RCM# 7891 Vane #429	3:16 PM
		42045 32962 72001FS1	
		Pinger #8763 2015 05/02	
		Acoust #337 Release Code BCGH 8KH2	3:18 PM

Anchor
3wheels

Depth 333m (lab)

3:32 PM

3.39

3:142

anchor dropped

Top float went down.

DAILY LOG

Ocean Sciences and Productivity Division

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Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
<i>14</i>	<i>JS1</i>	<i>1028</i>	<i>ROS</i>	<i>BE</i>		<i>50°32.99</i>	<i>126°46.02</i>							<i>Temp. is not right. I have been suspicious from ^{near} the beginning! But I didn't know what to do.</i>
		<i>1039</i>		<i>BO</i>	<i>022</i>	<i>50°32.93</i>	<i>126°45.97</i>	<i>467</i>		<i>240-255</i>				
		<i>1108</i>		<i>EN</i>		<i>50°32.99</i>	<i>126°45.97</i>							
<i>14</i>	<i>Je10</i>	<i>1436</i>	<i>ROS</i>	<i>BE</i>	<i>023</i>	<i>50°11.40</i>	<i>123°57.07</i>	<i>277</i>	<i>268</i>	<i>256-268</i>	<i>13</i>	<i>DJS</i>		
		<i>1443</i>		<i>BO</i>		<i>11.41</i>	<i>57.02</i>							
		<i>1500</i>		<i>EN</i>		<i>11.34</i>	<i>56.90</i>							
<i>15</i>	<i>Je9</i>	<i>1539</i>	<i>ROS</i>	<i>BE</i>	<i>024</i>	<i>50°8.60</i>	<i>123°50.48</i>	<i>363</i>	<i>357</i>	<i>269-283</i>	<i>15</i>			
		<i>1548</i>		<i>BO</i>		<i>8.61</i>	<i>50.44</i>							
		<i>1608</i>		<i>EN</i>		<i>8.57</i>	<i>50.39</i>							
<i>15</i>	<i>Je8</i>	<i>1637</i>	<i>ROS</i>	<i>BE</i>	<i>025</i>	<i>50°5.30</i>	<i>123°46.71</i>	<i>477</i>	<i>473</i>	<i>284-299</i>	<i>16</i>			
		<i>1650</i>		<i>BO</i>		<i>5.30</i>	<i>46.76</i>							
		<i>1712</i>		<i>EN</i>		<i>5.25</i>	<i>46.86</i>							
<i>15</i>	<i>Je7</i>	<i>1742</i>	<i>ROS</i>	<i>BE</i>	<i>026</i>	<i>50°2.52</i>	<i>123°51.25</i>	<i>545</i>	<i>540</i>	<i>300-316</i>	<i>17</i>			
		<i>1755</i>		<i>BO</i>		<i>2.54</i>	<i>51.24</i>							
		<i>1820</i>		<i>EN</i>		<i>2.61</i>	<i>51.28</i>							

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
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MR = messenger release time
RE = recover mooring time

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

Additional comments

Dec 14/02 2:50 am: The temperature probe ^{readings} are definitely out. With all the shallow casts + mixing up until now I wasn't sure. It would move a bit but not much. Then on this 460m cast it didn't move from 8.17°C all the way down. I tried to switch config #'s coefficients between Probe 1 + 2 in case they were switched like the O_2 + fluorometer at the start, but it didn't work. I put it back the way it was. (S.T.) I'm sorry - I just don't have enough experience for troubleshooting yet. 😞

Dario - maybe you + Darren can have a look at it in the a.m. when you have some time

on deck testing temperature

$9.4 - 9.3^{\circ}\text{C}$ (primary + secondary)

$(48.5 - 49^{\circ}\text{F})$ with Darren's thermometer

9.2

$$L = (F - 32) \cdot \frac{5}{9}$$

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>Dec</i>					Year <i>2002</i>			Ship <i>VECTOR</i>				Cruise ID <i>2002-36</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
<i>15</i>	<i>Je6</i>	<i>1904</i>	<i>ROS</i>	<i>BE</i>	<i>027</i>	<i>49°59.10</i>	<i>123°59.31</i>	<i>547</i>		<i>317-333</i>	<i>17</i>	<i>ST</i>		
		<i>1916</i>		<i>BO</i>		<i>49°59.07</i>	<i>123°59.29</i>		<i>545</i>					
		<i>1940</i>		<i>EN</i>		<i>49°59.</i>	<i>123°59.</i>							
<i>15</i>	<i>Je5</i>	<i>2021</i>	<i>ROS</i>	<i>BE</i>	<i>028</i>	<i>49°54.28</i>	<i>123°55.50</i>			<i>334-350</i>	<i>17</i>	<i>ST</i>		
		<i>2036</i>		<i>BO</i>		<i>49°54.26</i>	<i>123°55.44</i>	<i>661</i>						
		<i>2102</i>		<i>EN</i>		<i>49°54.20</i>	<i>123°55.23</i>		<i>648</i>					
	<i>Je4</i>	<i>2138</i>	<i>ROS</i>	<i>BE</i>		<i>49°49.51</i>	<i>123°54.21</i>					<i>ST</i>		
		<i>2153</i>		<i>BO</i>	<i>029</i>	<i>49°49.45</i>	<i>123°54.24</i>			<i>357-368</i>		<i>"</i>		
		<i>2219</i>		<i>EN</i>		<i>49°49.30</i>	<i>123°54.33</i>							
	<i>Je3</i>	<i>2300</i>	<i>ROS</i>	<i>BE</i>	<i>030</i>	<i>49°48.59</i>	<i>124°02.51</i>			<i>369-386</i>		<i>ST</i>		
		<i>2310</i>		<i>BO</i>		<i>49°48.61</i>	<i>124°02.56</i>	<i>660</i>						
		<i>2333</i>		<i>EN</i>		<i>49°48.58</i>	<i>124°02.58</i>		<i>670</i>					
	<i>Je2</i>	<i>00:08</i>	<i>ROS</i>	<i>BE</i>		<i>49°46.30</i>	<i>124°09.29</i>			<i>387-403</i>		<i>ST</i>		
		<i>0017</i>		<i>BO</i>	<i>031</i>	<i>49°46.30</i>	<i>124°09.32</i>	<i>604</i>						
		<i>0035</i>		<i>EN</i>		<i>49°46.37</i>	<i>124°09.38</i>		<i>605</i>					

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22 March 2002
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