

DAILY LOG BOOK

MISSION
NUMBER

2002-26

DATE:

From: July 15 to: July 19 2002

VESSEL:

Vector

PROJECT:

SoG - J & F

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

Captain: Arthur Gooding First Officer: Michael Shuckburgh
Second Officer: Mark Meester Third Officer: _____

Mission Participants / Agencies: IOS

Scientific Personnel:

Party Chief: Diane Maxson

Name	Watch	Cabin	Name	Watch	Cabin
Diane Masson	4-8	L.S.			
Lizeth Beauchemin	4-8	L.S.			
Bernard Minkley	8-12				
Sophie Johanneau	8-12	C.S.			
James Zwiers	8-12	horrible noisy cabin			
Sheila Toews	12-4	C.S.			
Andrew Lee	12-4				

Second leg of Mission:

Party Chief: _____

[illegible]

Data logging computer: FS01

Data acquisition program: Seasonal

CTD deck unit make: Saiborn model: 117 serial number: 2425

Primary CTD

Make: Seabird model: 911 serial number: 0550

Primary temperature serial number:

Primary conductivity serial number: 2399

Secondary temperature serial number: 2663

Secondary conductivity serial number: 2424

Transmissometer:

Transmissometer: _____ Model: _____ s/n: 333DR

Fluorometer: Model Wet Lab Sea Point Cable gain: 10 X s/n: 2226 P, S or NO pump?

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

PAR sensor: _____ Model: _____ s/n: _____
O4: _____

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

Other sensors: _____

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

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:

Transmissometer: _____ Model: _____ s/n: _____

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: _____

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

Other sensors: _____

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

Winches:

1. Make:	<u>Swann</u>	model:	<u>329</u>	serial #:	<u>1307</u>	used for:	<u>CTD primary</u>
2. Make:	<u>Swann</u>	model:	<u>329</u>	serial #:	<u>1482</u>	used for:	<u>CTD spare</u>
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: oxygen kit #4.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>					Year <i>2002</i>			Ship <i>Vector</i>				Cruise ID <i>2002-26</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							
15	SI	23:34:30	ROS	BE	1	48 38 98	123 29 65	110		1-4	4	<i>W</i>		
		23:37:50		BO		48 38 98	123 29 66		137					
		23:42:02		EN		48 38 99	123 29 64							
16	59	1:46	ROS	BE	2	48 37 80	123 14 56	227	235	5-18	14	<i>LA</i>		
		1:51		BO		48 37 82	123 14 60							
		2:00		EN		48 37 98	123 14 66							
	60	2:44	ROS	BE	3	48 33 93	123 12 77	293	285	<i>/</i>				
		2:50		BO		48 34 06	123 12 85							
		2:56		EN		48 34 19	123 12 86		0.7					
16	61	0347	ROS	BE	4	48 29 27	123 09 23	260		<i>/</i>				
				BO		48 29 27	123 09 32		278					
		03:59		EN		48 29 26	123 09 36							
16	103	10:51	CTD	BE	5	48 33 03	124 43 02	123		<i>/</i>				
		10:54		BO		48 33 04	124 43 10		112					
		10:57		EN		48 33 05	124 43 19							
16	102	11:34	ROS	BE	6	48 30 03	124 43 97	260		19-33	15			
		11:40		BO		48 30 05	124 43 97		249					
		11:49		EN		48 30 05	124 43 97							

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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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>					Year <i>2002</i>			Ship <i>CCGS Vector</i>				Cruise ID <i>2002-26</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>16</i>	<i>101</i>	<i>12:37</i>	<i>ROS</i>	<i>BE</i>	<i>7</i>	<i>48 25 47</i>	<i>124 45 16</i>	<i>143</i>		<i>/</i>	<i>1</i>				
		<i>12:40</i>		<i>BO</i>		<i>48 25 49</i>	<i>124 45 16</i>	<i>137</i>	<i>137</i>						
		<i>12:43</i>		<i>EN</i>		<i>48 25 50</i>	<i>124 45 16</i>								
<i>16</i>	<i>74</i>	<i>13:41</i>	<i>ROS</i>	<i>BE</i>	<i>8</i>	<i>48 25 08</i>	<i>124 35 58</i>	<i>190</i>		<i>/</i>					
		<i>13:45</i>		<i>BO</i>		<i>48 25 07</i>	<i>124 35 58</i>		<i>182</i>						
		<i>13:48</i>		<i>EN</i>		<i>48 25 06</i>	<i>124 35 61</i>								
<i>16</i>	<i>75</i>	<i>14:22</i>	<i>ROS</i>	<i>BE</i>	<i>9</i>	<i>48 28 12</i>	<i>124 32 89</i>	<i>230</i>		<i>34-47</i>	<i>14</i>				
		<i>14:28</i>		<i>BO</i>		<i>48 28 13</i>	<i>124 32 87</i>		<i>217</i>						
		<i>14:37</i>		<i>EN</i>		<i>48 28 15</i>	<i>124 32 85</i>								
<i>16</i>	<i>76</i>	<i>15:10</i>	<i>ROS</i>	<i>BE</i>	<i>10</i>	<i>48 31.32</i>	<i>124 29 96</i>	<i>95</i>		<i>/</i>					
		<i>15:13</i>		<i>BO</i>		<i>48 31.32</i>	<i>124 29.94</i>		<i>86</i>						
		<i>15:16</i>		<i>EN</i>		<i>48 31 32</i>	<i>124 29 93</i>								
<i>16</i>	<i>72</i>	<i>17:34</i>	<i>ROS</i>	<i>BE</i>	<i>11</i>	<i>48 18.66</i>	<i>124 04.00</i>			<i>48-60</i>	<i>13</i>				<i>Removed weight and handle</i>
		<i>17:39</i>		<i>BO</i>		<i>48 18.68</i>	<i>124 04.05</i>		<i>85</i>						
		<i>17:50</i>		<i>EN</i>		<i>48 18.69</i>	<i>124 04.17</i>								
<i>16</i>	<i>73</i>	<i>18:46</i>	<i>ROS</i>	<i>BE</i>	<i>12</i>	<i>48 15.03'</i>	<i>124 06.70'</i>	<i>162</i>		<i>61-64</i>					<i>Begin line</i>
		<i>1850</i>		<i>BO</i>		<i>48 15.07</i>	<i>124 06.69</i>		<i>148</i>						
		<i>1856</i>		<i>EN</i>		<i>48 15.15</i>	<i>124 06.75</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
• BO = bottom time of cast
• EN = end of cast time

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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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>					Year <i>2002</i>			Ship <i>Vecten</i>				Cruise ID <i>2002-26</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>16</i>	<i>L1</i>	<i>1910</i>	<i>CTD</i>	<i>BE</i>	<i>13</i>	<i>48°15.83</i>	<i>124°05.98</i>	<i>185</i>				<i>ST</i>			
		<i>1913</i>		<i>BO</i>		<i>48°15.85</i>	<i>124°06.07</i>		<i>175</i>						
		<i>1915</i>		<i>EN</i>		<i>48°15.86</i>	<i>124°06.15</i>								
<i>16</i>	<i>L2</i>	<i>1929</i>	<i>ROS</i>	<i>BE</i>	<i>14</i>	<i>48°16.58</i>	<i>124°05.22</i>	<i>187</i>							
		<i>1933</i>		<i>BO</i>		<i>48°16.59</i>	<i>124°05.31</i>		<i>179</i>	<i>65-68</i>	<i>4</i>				
		<i>1939</i>		<i>EN</i>		<i>48°16.59</i>	<i>124°05.30</i>					<i>ST</i>			
<i>16</i>	<i>L3</i>	<i>1950</i>	<i>CTD</i>	<i>BE</i>	<i>15</i>	<i>48°17.17</i>	<i>124°04.63</i>								
		<i>1954</i>		<i>BO</i>		<i>48°17.17</i>	<i>124°04.73</i>	<i>206</i>							
		<i>1957</i>		<i>EN</i>		<i>48°17.17</i>	<i>124°04.81</i>		<i>191</i>						
<i>16</i>	<i>L4</i>	<i>2032</i>	<i>ROS</i>	<i>BE</i>	<i>16</i>	<i>48°17.92</i>	<i>124°03.84</i>			<i>69-72</i>					
		<i>2036</i>		<i>BO</i>		<i>48°17.94</i>	<i>124°03.83</i>		<i>191</i>						
		<i>2043</i>		<i>EN</i>	<i>17</i>	<i>48°17.95</i>	<i>124°03.88</i>	<i>182</i>							
<i>16</i>	<i>L5</i>	<i>2055</i>	<i>CTD</i>	<i>BE</i>	<i>17</i>	<i>48°18.64</i>	<i>124°03.04</i>								
		<i>2058</i>		<i>BO</i>		<i>48°18.65</i>	<i>124°03.09</i>	<i>188</i>							
		<i>2101</i>		<i>EN</i>		<i>48°18.67</i>	<i>124°03.12</i>		<i>181</i>						
<i>16</i>	<i>L6</i>	<i>2114</i>	<i>ROS</i>	<i>BE</i>	<i>18</i>	<i>48°19.41</i>	<i>124°02.29</i>			<i>73-76</i>			✓		
		<i>2117</i>		<i>BO</i>		<i>48°19.42</i>	<i>124°02.32</i>		<i>173</i>						
		<i>2123</i>		<i>EN</i>		<i>48°19.44</i>	<i>124°02.39</i>	<i>165</i>							

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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							
16	L7	2134	CTD	BE	19	48°20.17	124°01.49	162				ST.		
		2138		BO		48°20.20	124°01.54		158					hit bottom
		2140		EN		48°20.21	124°01.56							
16	L8	2151	ROS	BE	20	48°20.92	124°03.73	145		77-80				
		2153		BO		48°20.94	124°00.78		81					
		2157		EN		48°20.96	124°00.81							
16	L9	2209	CTD	BE	21	48°21.57	124°00.11							
		2212		BO		48°21.56	124°00.14	130	123					
		2214		EN		49°21.56	124°00.18							
16	71	2225	ROS	BE	22	48°22.21	123°59.40			81-84				
		2227		BO		48°22.19	123°59.37	107	100					
		2232		EN		48°22.18	123°59.34							
16	70	2350	CTD	BE	23	48°19.19	123°43.17	153						
		2354		BO		48°19.13	123°43.18		146					
		2357		EN		48°19.09	123°43.19							
17	69	00:36	ROS	BE	24	48°15.59	123°43.24	180		85-96				
		00:36		EN		48°15.59	123°43.28		174					
		00:38		BO		48°15.59	123°43.41							

Cast type:

BOT = bottle cast, no CTD
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USW = sea water loop
MOR = mooring
NET = net haul
DRF = drifter

• bottle firing method:
• US = up / stop
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Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month					Year			Ship				Cruise ID			
July					2002			CCGS Vector				2002-26			
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								
17	68	1113	CTD	BE	25	48 12.21	123 42.95	142							
		1:16		BO	26	48 12.20	123 42.90		129						
		1:20		EN		48 12.19	123 42.86								
17	105	03:02	CTD	BE	26	48 10.99	123 18.93	88							
		03:05		BO		48 10.98	123 18.92		84						
		03:07		EN	2	48 10.97	123 18.89								
17	ADCP	03:37	ROS	BE	27	48 13.94	123 17.79	12.2		97-106	10.				
		03:41		BO		48 13.93	123 17.69		116						
		03:49		EN		48 13.84	123 17.38								
17	104	04:37	CTD	BE	28	48 20.06	123 15.23	71.							
		04:39		BO		48 20.12	123 15.65		65						
		04:40		EN		48 20.16	123 15.60								
17	67	05:10	CTD	BE	29	48 22.74	123 18.03	112							
		05:13		BO		48 22.72	123 17.97		105						
		05:15		EN		48 22.71	123 17.91								
17	66	05:47	CTD	BE	30	48 19.34	123 13.92	103							
		05:49		BO		48 19.35	123 13.88		92						
		05:51		EN		48 19.35	123 13.85								

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INSTITUTE OF OCEAN SCIENCES

Month <i>JULY</i>					Year <i>2002</i>			Ship <i>Vector</i>				Cruise ID <i>2002-26</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>17</i>	<i>62</i>	<i>0650</i>	<i>ROS</i>	<i>BE</i>	<i>31</i>	<i>48° 22.83</i>	<i>123° 02.60</i>	<i>151</i>				<i>ST</i>		<i>no pinger</i>
		<i>0653</i>		<i>BO</i>		<i>48° 22.87</i>	<i>123° 02.62</i>		<i>138</i>	<i>107-117</i>	<i>11</i>			
		<i>0703</i>		<i>EN</i>		<i>48° 22.77</i>	<i>123° 02.68</i>							
<i>17</i>	<i>65</i>	<i>0804</i>	<i>ROS</i>	<i>BE</i>	<i>32</i>	<i>48° 15.92</i>	<i>123° 09.84</i>	<i>128</i>				<i>ST</i>		
		<i>0806</i>		<i>BO</i>		<i>48° 15.92</i>	<i>123° 09.90</i>			<i>118-127</i>	<i>10</i>			
		<i>0814</i>		<i>EN</i>		<i>48° 15.91</i>	<i>123° 10.13</i>							
<i>17</i>	<i>64</i>	<i>0851</i>	<i>CTD</i>	<i>BE</i>	<i>33</i>	<i>48° 12.83</i>	<i>123° 05.81</i>	<i>110</i>				<i>ST</i>		
		<i>0854</i>		<i>BO</i>		<i>48° 12.85</i>	<i>123° 05.86</i>		<i>105</i>					
		<i>0856</i>		<i>FN</i>		<i>48° 12.85</i>	<i>123° 05.90</i>							
<i>17</i>	<i>63</i>	<i>0941</i>	<i>CTD</i>	<i>BE</i>	<i>34</i>	<i>48° 14.64</i>	<i>122° 58.57</i>	<i>154</i>				<i>ST</i>		
		<i>0944</i>		<i>BO</i>		<i>48° 14.62</i>	<i>122° 58.66</i>		<i>145</i>					
		<i>0947</i>		<i>EN</i>		<i>48° 14.64</i>	<i>122° 58.74</i>							
<i>17</i>	<i>54</i>	<i>11:47</i>	<i>CTD</i>	<i>BE</i>	<i>35</i>	<i>48° 26.60</i>	<i>122° 44.28</i>	<i>80</i>						
		<i>11:49</i>		<i>BO</i>		<i>48° 26.60</i>	<i>122° 44.28</i>		<i>74</i>					
		<i>11:50</i>		<i>EN</i>		<i>48° 26.58</i>	<i>122° 44.29</i>	<i>63</i>						
<i>17</i>	<i>53</i>	<i>12:50</i>	<i>CTD</i>	<i>BE</i>	<i>36</i>	<i>48° 33.16</i>	<i>122° 45.00</i>		<i>58</i>					
		<i>12:51</i>		<i>BO</i>		<i>48° 33.14</i>	<i>122° 45.01</i>							
		<i>12:53</i>		<i>EN</i>		<i>48° 33.12</i>	<i>122° 45.01</i>							

Cast type:
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- bottle firing method:
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- Time Code
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Month JULY					Year 2002			Ship Vector				Cruise ID 2002-26			
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								
17	52	13:43	CTD	BE	37	48 38.88	122 43:29	87							
		13:45		BO		48 38.86	122 43:27		80						
		13:46		EN		48 38.85	122 43:26								
17	51	15:08	CTD	BE	38	48 46.77	122 51.70	167							
		15:12		BO		48 46.82	122 51.75		160						
		15:15		EN		48 46.87	122 51.79								
17	56	16:40	ROS	BE	39	48 46.46	123 01.56	213		128-140	13			CTD 1st lifted out of water (no error message)	
		16:46		BO		48 46.45	123 01.58		208					may have hit bottom	
		17:00		EN		48 46.43	123 01.64								
17	57	17:40	CTD	BE	40	48 43.98	123 08.03	161							
		17:43		BO		48 43.99	123 07.97		150						
		17:42		EN		48 44.01	123 07.91								
17	58	18:54	CTD	BE	41	48 42.99	123 14.09	330						redox - pump out on 1st time S.T.	
		19:01		BO		48 42.96	123 13.89		315						
		19:07		EN		48 43.01	123 13.89								
17	47	23:41	CTD	BE	42	48 49.30	123 6 25	187							
		23:45		BO		48 49.30	123 6 26		179						
		23:48		EN		48 49.31	123 6 24								

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JULY					Year 2002			Ship Vector				Cruise ID 2002-26		
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							
18	48	00:24	BE	CTD	43	48:51:72	123:3:20	230						
		00:28	BO			48:51:69	123:3:23		220					
		00:32	EN			48:51:67	123:3:23							
18	49	1:06	BE	CTD	44	48:54:98	122:59:61	135						
		1:08	BO			48:54:96	122:59:61		127					
		1:11	EN			48:54:93	122:59:61							
18	50	1:40	BE	CTD	45	48:57:71	122:56:13	28						
		1:41	BO			48:57:71	122:56:14		25					
		1:42	BE			48:57:71	122:56:16							
18	44	2:26	BE	CTD	46	48:56:78	123:6:06	121						
		2:29	BO			48:56:80	123:6:07		119					
		2:32	EN			48:56:81	123:6:07							
18	45	2:57	BE	CTD	47	48:53:92	123:8:45	130						
		03:00	BO			48:53:96	123:8:48		121					
		03:03	EN			48:53:97	123:8:49							
18	46	03:28	BE	AMS	48	48:51:42	123:10:83	180.		142-153	12			
		03:33	BO			48:51:46	123:10:82		170					
		03:45	EN			48:51:63	123:10:81							

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22 March 2002
Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>					Year <i>2002</i>			Ship <i>CGS Vector</i>				Cruise ID <i>2002-26</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							
18	43	05:22	CTD	BE	49	49 0.22	123 30.13	202					✓	<i>nice + calm; should have good surface water</i>
		05:27		BO		49 0.21	123 30.16		192					
		05:31		EN		49 0.19	123 30.17							
	42	06:07	ROS	BE	50	49 1.82	123 26.26	324		154-170	17			<i>hit jellyfish</i>
		06:09		BO		49 01.83	123 26.33							
		06:25		EN		49 01.83	123 26.66							
	41	06:55	CTD	BE	51	49 03.31	123 22.23	248				ST.		
		07:00		BO		49 03.33	123 22.40		237			↓		
		07:04		EN		49 03.31	123 22.43							
	37	08:25	CTD	BE	52	49 13.58	123 20.71	218						
		08:26		BO		49 13.57	123 20.72		204					
		08:31		EN		49 13.56	123 20.73							
	38	09:00	CTD	BE	53	49 12.00	123 26.40	312						
		09:07		BO		49 11.99	123 26.41		302					
		09:12		EN		49 11.99	123 26.40							
	39	09:50	ROS	BE	54	49 09.83	123 32.98	379						
		09:58		BO		49 09.93	123 33.07		370	171-187		ST		
		10:17		EN		49 10.05	123 33.19							

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INSTITUTE OF OCEAN SCIENCES

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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>18</i>	<i>40</i>	<i>10:46</i>	<i>CTD</i>	<i>BE</i>	<i>55</i>	<i>49 8 63</i>	<i>123 36 82</i>	<i>142</i>						
		<i>10:49</i>		<i>BO</i>		<i>49 8 63</i>	<i>123 36 79</i>		<i>138</i>					
		<i>10:52</i>		<i>EN</i>		<i>49 8 62</i>	<i>123 36 76</i>							
<i>18</i>	<i>26</i>	<i>12:08</i>	<i>CTD</i>	<i>BE</i>	<i>56</i>	<i>49 14 25</i>	<i>123 50 80</i>	<i>250</i>						
		<i>12:13</i>		<i>BO</i>		<i>49 14 24</i>	<i>123 50 74</i>		<i>243</i>					
		<i>12:18</i>		<i>EN</i>		<i>49 14 23</i>	<i>123 50 75</i>							
<i>18</i>	<i>27</i>	<i>12:55</i>	<i>ROS</i>	<i>BE</i>	<i>57</i>	<i>49 19 12</i>	<i>123 48 01</i>	<i>346</i>		<i>188-203</i>	<i>16</i>			
		<i>13:02</i>		<i>BO</i>		<i>49 19 11</i>	<i>123 48 07</i>		<i>341</i>					
		<i>13:14</i>		<i>EN</i>		<i>49 19 14</i>	<i>123 48 09</i>							
<i>18</i>	<i>28</i>	<i>13:54</i>	<i>CTD</i>	<i>BE</i>	<i>58</i>	<i>49 24 12</i>	<i>123 45 32</i>	<i>138</i>						
		<i>13:57</i>		<i>BO</i>		<i>49 24 13</i>	<i>123 45 33</i>		<i>133</i>					
		<i>13:59</i>		<i>EN</i>		<i>49 24 14</i>	<i>123 45 33</i>							
<i>18</i>	<i>24</i>	<i>15:33</i>	<i>CTD</i>	<i>BE</i>	<i>59</i>	<i>49 30.42</i>	<i>124 6.11</i>	<i>430</i>					<i>✓</i>	<i>* 2002-26-0059</i>
		<i>15:42</i>		<i>BO</i>		<i>49 30.45</i>	<i>124 6.01</i>		<i>420</i>					<i>was stored into</i>
		<i>15:49</i>		<i>EN</i>		<i>49 30.42</i>	<i>124 5.86</i>							<i>2002-26-005</i>
<i>18</i>	<i>25</i>	<i>16:14</i>	<i>CTD</i>	<i>BE</i>	<i>60</i>	<i>49 27.76</i>	<i>124 7.50</i>	<i>286</i>						<i>↓</i>
		<i>16:20</i>		<i>BO</i>		<i>49 27.76</i>	<i>124 7.48</i>		<i>275</i>			<i>XML</i>		<i>has been renamed</i>
		<i>16:25</i>		<i>EN</i>		<i>49 27.74</i>	<i>124 7.43</i>							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>					Year <i>2002</i>			Ship <i>CCOS Vector</i>				Cruise ID <i>2002-26</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							
18	2	16:55	ROS	BE	61	49 24.09	124 9.40	283		204-218	15.	AM	✓	
		17:01		BO		49 24.06	124 9.46		275					
		17:19		EN		49 23.96	124 9.24							
18	1	17:53	CTD	BE	62	49 20.30	124 12.10	251						
		17:57		BO		49 20.34	124 12.09		240					
		18:02		EN		49 20.37	124 12.14							
18	4	18:57	CTD	BE	63	49° 24.53	124° 22.15	346						
		19:04		BO		49° 24.59	124° 22.28		337			S.T.		
		19:10		EN		49° 24.64	124° 22.35							
18	3	19:30	ROS	BE	64	49° 26.60	124° 20.20	326						
		19:36		BO		49° 26.61	124° 20.25		317	219-234	16			
		19:51		EN		49° 26.65	124° 20.30							
18	5	20:36	CTD	BE	65	49° 27.42	124° 30.82	319						
		20:43		BO		49° 27.45	124° 30.88		310					
		20:47		EN		49° 27.47	124° 30.92							
18	6	21:16	ROS	BE	66	49° 30.62	124° 27.79	197						
		21:23		BO		49° 30.69	124° 27.83		184	235-247	13	✓		
		21:33		EN		49° 30.74	124° 27.78							

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Ocean Sciences and Productivity Division

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Month July					Year 2002			Ship Vector				Cruise ID 2002-26		
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							
18	7	2205	CTD	BE	67	49°34.42	124°24.21	356				ST		
		2212		BO		49°34.44	124°24.29		347					
		2217		EN		49°34.46	124°24.36							
18	8	2305	CTD	BE	68	49°39.33	124°33.06	348						
		2312		BO		49°39.33	124°33.12		338					
		2317		EN		49°39.33	124°33.21							
18	9	2353	ROS	BE	69	49°35.51	124°38.31	172		248-259	12			
		2356		BO		49°35.52	124°38.33		162					
19		0002		EN		49°35.53	124°38.29							
19	10	0054	CTD	BE	70	49°40.73	124°47.31	98						
		0056		BO		49°40.76	124°47.29		100					
		0058		EN		49°40.77	124°47.28							
19	11	0122	CTD	BE	71	49°42.42	124°43.40	304						
		0128		BO		49°42.49	124°43.39		297					
		0133		EN		49°42.51	124°43.43							
19	12	1153	ROS	BE	72	49°43.62	124°40.84	358		260-276	17			* 1 stop on way down at ~150 m.
		2101		BO		49°43.66	124°40.96		351					
		2112		EN		49°43.74	124°41.07							

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Month <i>July</i>					Year <i>2002</i>			Ship <i>CCGS Vector</i>				Cruise ID <i>2002-26</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>19</i>	<i>13</i>	<i>03:40</i>	<i>CTD</i>	<i>BE</i>	<i>73</i>	<i>49 55.31</i>	<i>124 55.20</i>	<i>242</i>					☒	
		<i>03:45</i>		<i>BO</i>		<i>49 55.33</i>	<i>124 55.22</i>		<i>230</i>					
		<i>03:50</i>		<i>EN</i>		<i>49 55.33</i>	<i>124 55.28</i>							
<i>19</i>	<i>14</i>	<i>04:20</i>	<i>ROS</i>	<i>BE</i>	<i>74</i>	<i>49 53.01</i>	<i>124 59.60</i>	<i>318</i>		<i>277-292</i>	<i>16</i>			
		<i>04:26</i>		<i>BO</i>		<i>49 53.01</i>	<i>124 59.65</i>		<i>310</i>					
		<i>04:44</i>		<i>EN</i>		<i>49 53.14</i>	<i>124 59.73</i>							
<i>19</i>	<i>15</i>	<i>05:11</i>	<i>CTD</i>	<i>BE</i>	<i>75</i>	<i>49 51.69</i>	<i>125 01.63</i>	<i>133</i>						
		<i>05:13</i>		<i>BO</i>		<i>49 51.70</i>	<i>125 01.62</i>		<i>125</i>					
		<i>05:16</i>		<i>EN</i>		<i>49 51.70</i>	<i>125 01.62</i>							
<i>19</i>	<i>16</i>	<i>06:16</i>	<i>ROS</i>	<i>BE</i>	<i>76</i>	<i>49 57.70</i>	<i>125 08.81</i>	<i>160</i>						
		<i>06:20</i>		<i>BO</i>		<i>49 57.71</i>	<i>125 08.71</i>		<i>153</i>					
		<i>06:31</i>		<i>EN</i>		<i>49 57.77</i>	<i>125 08.66</i>							
<i>19</i>	<i>23</i>	<i>07:34</i>	<i>CTD</i>	<i>BE</i>	<i>77</i>	<i>50° 01.98</i>	<i>125° 13.62</i>	<i>77</i>				<i>ST.</i>		<i>(put sta. # 21 in computer header by mistake - ST)</i>
		<i>07:35</i>		<i>BO</i>		<i>50° 01.97</i>	<i>125° 13.63</i>		<i>64</i>					
		<i>07:36</i>		<i>EN</i>		<i>50° 01.97</i>	<i>125° 13.63</i>							
<i>19</i>	<i>17</i>	<i>08:45</i>	<i>CTD</i>	<i>BE</i>	<i>78</i>	<i>49° 58.79</i>	<i>125° 04.43</i>	<i>272</i>						
		<i>08:50</i>		<i>BO</i>		<i>49° 58.73</i>	<i>125° 04.41</i>		<i>264</i>					
		<i>08:54</i>		<i>EN</i>		<i>49° 58.69</i>	<i>125° 04.40</i>							

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Month <i>July</i>					Year <i>2002</i>			Ship <i>VECTOR</i>			Cruise ID <i>2002-26</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>19</i>	<i>18</i>	<i>0922</i>	<i>CTD</i>	<i>BE</i>	<i>79</i>	<i>49°59.22</i>	<i>124°58.95</i>	<i>150</i>						
		<i>0926</i>		<i>BO</i>		<i>49°59.20</i>	<i>124°58.94</i>		<i>143</i>					
		<i>0928</i>		<i>EN</i>		<i>49°59.19</i>	<i>124°58.94</i>							
	<i>19</i>	<i>1003</i>	<i>CTD</i>	<i>BE</i>	<i>80</i>	<i>50°01.25</i>	<i>124°52.92</i>	<i>278</i>						
		<i>1009</i>		<i>BO</i>		<i>50°01.23</i>	<i>124°52.87</i>							
		<i>1014</i>		<i>EN</i>		<i>50°01.23</i>	<i>124°52.86</i>							
<i>19</i>	<i>20</i>	<i>12:27</i>	<i>CTD</i>	<i>BE</i>	<i>81</i>	<i>49°47.23</i>	<i>124°32.29</i>	<i>300</i>						
		<i>12:33</i>		<i>BO</i>		<i>49°47.26</i>	<i>124°32.33</i>		<i>298</i>					
		<i>12:38</i>		<i>EN</i>		<i>49°47.26</i>	<i>124°32.34</i>							
<i>19</i>	<i>22</i>	<i>1405</i>	<i>CTD</i>	<i>BE</i>	<i>82</i>	<i>49°40.20</i>	<i>124°16.34</i>	<i>354</i>						<i>hit another stinky</i>
		<i>1411</i>		<i>BO</i>		<i>49°40.22</i>	<i>124°16.36</i>		<i>349</i>					<i>jellyfish</i>
		<i>14:18</i>		<i>EN</i>		<i>49°40.22</i>	<i>124°16.35</i>							
<i>19</i>	<i>SG3</i>	<i>1730</i>	<i>CTD</i>	<i>BE</i>	<i>83</i>	<i>49°17.06</i>	<i>123°47.96</i>	<i>420</i>					✓	<i>hit jellyfish.</i>
		<i>1739</i>		<i>BO</i>		<i>49°17.12</i>	<i>123°48.07</i>		<i>404</i>					
		<i>17</i>		<i>EN</i>		<i>49°17.14</i>	<i>123°48.13</i>							
<i>19</i>	<i>SG2</i>	<i>2021</i>	<i>CTD</i>	<i>BE</i>	<i>84</i>	<i>49°01.44</i>	<i>123°23.98</i>	<i>277</i>						
		<i>2026</i>		<i>BO</i>		<i>49°01.48</i>	<i>123°24.06</i>		<i>271</i>					
		<i>2030</i>		<i>EN</i>		<i>49°01.51</i>	<i>123°24.11</i>							

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