

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2013-12

DATE:

From: 10 APRIL 2013 To: 16 APRIL 2013

VESSEL:

CCGS VECTOR

PROJECT(S):

STRAIT OF GEORGIA JUAN DE FUCA
WATER PROPERTIES SURVEY

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

Captain: SIMON DOCKORILL First Officer: MARK MEESTER

Second Officer: GLEN DICKS Third Officer: _____

Fishing Master: _____ Chief Engineer: _____

Mission Participants / Agencies:

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: Chief Scientist: *PETER CHANDLER*

Name	Watch	Cabin	Name	Watch	Cabin
PETER CHANDLER	1	1			
SCOTT ROSE	2	3			
GLENN COOPER	2	2			
KELLY YOUNG	1	4			
CINDY WRIGHT	2	4			
KENNY SCORZAFANA	1	2			

2nd Leg Scientific Personnel: Chief Scientist:

[illegible]

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: #2
Data acquisition program: Seasave
CTD deck unit make: SBE model: 11t serial number: 0425

Primary CTD

Make: SBE model: 9t serial number: 585
Primary temperature serial number: 4054
Primary conductivity serial number: 3321
Secondary temperature serial number: 4700
Secondary conductivity serial number: 1766
Transmissometer: Wet labs Model: C-Star s/n: 1185DR
Transmissometer: _____ Model: _____ s/n: _____
Fluorometer: Model Seapoint Cable gain: 3x s/n: 2228 P or NO pump?
Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?
Oxygen sensor: SBE Model: 43 s/n: 1438 P or NO pump?
PAR sensor: Bio-Spherical Model: QL200 s/n: 4601 Surface PAR? Y / N
Other sensors: pH s/n: 0692 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: _____ model: _____ serial number: _____
Primary temperature serial number: _____
Primary conductivity serial number: _____
Secondary temperature serial number: _____
Secondary conductivity serial number: _____
Transmissometer: _____ Model: _____ s/n: _____
Transmissometer: _____ Model: _____ s/n: _____
Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?
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: _____ Surface PAR? Y / 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): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

DAILY SCIENCE LOG

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Month <u>APRIL</u>				Year <u>2013</u>		Vessel <u>VECTOR</u>				Cruise ID <u>2013-12</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	SI	10	21:20	BE	ROS	US	48°38.88	123°28.85	92		1 - 9	9	RE	☒	TEST CAST
			21:26	BO			48°38.88	123°28.86		90	-			☐	
			21:34	EN			48°38.88	123°28.88			-			☐	
			:				°	°			-			☐	
2	58	10	23:30	BE	ROS		48°42.99	123°14.20	330		-		RE	☒	
			23:37	BO			°42.95	°14.07		320	-			☐	
			23:44	EN			°42.95	°13.83			-			☐	
			:				°	°			-			☐	
3	57	11	00:33	BE	ROS		48°43.99	123°8.16	162		-		RE	☒	
			00:36	BO			°44.03	°8.07		152	-			☐	4 m off bottom
			00:39	EN			°44.06	°7.99			-			☐	
			:				°	°			-			☐	
4	56	11	01:13		ROS	US	48°46.38	123°1.61	211		10 - 23	14	RE	☒	5 m off bottom
			01:16				°46.40	°1.57		207	-			☐	
			01:29				°46.57	°1.45			-			☐	
			:				°	°			-			☐	
5	47	11	02:19		ROS		48°49.25	123°6.14	186		-		RE	☒	
			02:24				°49.26	°6.18		181	-			☐	
			02:27				°49.26	°6.20			-			☐	

Event Type:

BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
=

Bottle Firing Method:

US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
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Depart Pat Bay 1400 - calmer no rain, wind 10 kts

Saamich Inlet test station, test of VENUS platform to check with Marty's data

- test vertical SCOR net tow - adjustment to technique needed, no cast made

using STBD WIND 1483 - nice & quiet

backlog centre bench 1307

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							Latitude	Longitude							
6	48	11	02:56	BE	ROS		48° 51.71	123° 3.28	230		-		R	☒	
			03:01	BO			° 51.71	° 3.27		227	-			☐	
			03:04	EN			° 51.70	° 3.25			-			☐	
			:				°	°			-			☐	
7	49	11	03:39	BE	ROS		48° 54.99	122° 59.65	131		-		PD	☒	
			03:41	BO			° 55.01	° 59.66		130	-			☐	4 m off bottom
			03:43	EN			° 55.02	° 59.63			-			☐	
			:				°	°			-			☐	
8	50	11	04:16	BE	ROS		48° 57.70	122° 56.10	26		-		PD	☒	
			04:17	BO			° 57.70	° 56.10			-			☐	
			04:18	EN			° 57.71	° 56.10			-			☐	
			:				°	°			-			☐	
9	44	11	05:19	BE	ROS		48° 56.77	123° 5.98	121		-		R	☒	
			:22	BO			° 56.77	° 5.98		117	-			☐	
			:24	EN			° 56.76	° 5.97			-			☐	
			:				°	°			-			☐	
10	45	11	06:08	BE	ROS		48° 53.90	123° 8.37	126		-		R	☒	
			:10	BO			° 53.90	° 8.38		124	-			☐	4 m off bottom
			:12	EN			° 53.91	° 8.38			-			☐	

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APRIL				2013			VECTOR			2013-12					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
11	46	11	06:46	BE	ROS	US	48° 51.38	123° 10.81	178		24 - 35	12	RXY,KS	☒	
			06:50	BO			° 51.41	° 10.77		172	-			☐	
			07:03	EN			° 51.59	° 10.65			-			☐	
12	107	11	08:13	BE	ROS	—	48° 58.39	123° 17.97	180		-	—	SR	☒	
			08:16	BO			° 58.39	° 17.96		175	-			☐	
			08:19	EN			° 58.39	° 17.94			-			☐	
13	106	11	08:58	BE	ROS	—	49° 1.00	123° 13.19	75		-	—	SR	☒	
			09:00	BO			° 1.00	° 13.18		70	-			☐	
			09:01	EN			° 0.99	° 13.17			-			☐	
14	43	11	10:33	BE	ROS	—	49° 0.20	123° 30.07	208		-	—	SR	☒	
			10:37	BO			° 0.22	° 30.06		203	-			☐	
			10:41	EN			° 0.22	° 30.07			-			☐	
15	42	11	11:10	BE	ROS	US	49° 1.80	123° 26.17	320		36-51	16	SR	☒	bot 11 didn't trip, I
			11:16	BO			° 1.79	° 26.17		314	-			☐	replaced the trip
			11:34	EN			° 1.75	° 26.25			-			☐	mechanism. SR
16	41	11	12:21	BE	ROS	—	49° 3.28	123° 22.30	243		-		SR	☒	
			12:26	BO			° 3.28	° 22.29		239	-			☐	
			12:30	EN			° 3.29	° 22.28			-			☐	
			:				°	°			-			☐	

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
17	41	11	12:39	BO	NET		49° 3.31	123° 22.29	243		-		SR	☐	
			12:41	EN			° 3.30	° 22.32		50	-			☐	
18	41	11	12:55	BO	NET		49° 3.33	123° 22.32	243		-		SR	☐	
			13:05	EN			° 3.36	° 22.37		235	-			☐	
19	108	11	13:30	BE	ROS	✓	49° 4.34	123° 19.12	97		-		SR	☒	
			13:32	BO			° 4.32	° 19.12		94	-			☐	
			13:34	EN			° 4.32	° 19.13			-			☐	
20	37	11	14:58	BE	ROS	✓	49° 13.57	123° 20.73	214		-		SR	☒	
			15:02	BO			° 13.52	° 20.78		209	-			☐	change
			15:06	EN			° 13.47	° 20.78			-			☐	route
21	28	11	17:37	BE	ROS	✓	49° 24.08	123° 45.27	133		-			☐	
			17:40	BO			° 24.08	° 45.27		126	-			☐	
			17:43	EN			° 24.06	° 45.27			-			☐	
22	24	11	19:29	BE	ROS	✓	49° 30.26	124° 5.66	428		-		PP	☒	
			19:37	BO			° 30.27	° 5.99		421	-			☐	
			19:45	EN			° 30.28	° 6.03			-			☐	
23	25	11	20:12	BE	ROS	✓	49° 27.64	124° 7.54	304		-			☒	
			20:19	BO		✓	° 27.62	° 7.53		318	-			☐	6 m. off bottom
			20:25	EN		✓	° 27.63	° 7.50			-			☐	

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- weather deteriorating - conditions unfavourable for samplings mid-shaft; steam north

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Month				Year			Vessel			Cruise ID					
APRIL				2013			VECTOR			2013-12					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
24	2	11	20:52	BE	ROS	US	49° 24.12	124° 9.37	275		52 - 66	15	RE	☒ ☐	bottle 13 did
			20:58	BO			° 24.13	° 9.43		270	-			☐ ☐	not fire
			21:13	EN			° 24.14	° 9.43			-			☐ ☐	
25	CPF1	11	21:45	BE	NET		49° 22.01	124° 5.17	245		-		KY	☐ ☐	stem A-Frame
			21:47	BO			° 22.01	° 5.18		50	-			☐ ☐	down 0.5 m/s
			21:48	EN			° 22.00	° 5.18			-			☐ ☐	up 1.0 m/s
26	CPF1	11	21:54	BE	NET		49° 21.98	124° 5.21	246		-			☐ ☐	- lots of stuff
			22:02	BO			° 22.00	° 5.26		235	-		KY	☐ ☐	in net
			22:06	EN			° 22.01	° 5.31			-			☐ ☐	
27	1	11	22:47	BE	ROS	✓	49° 20.29	124° 12.03	245		-		RE	☒ ☐	test fire 16 bottles
			22:52	BO			° 20.29	° 11.99		242	-			☐ ☐	at surface
			22:57	EN			° 20.33	° 11.98			-			☐ ☐	13:19 DNF
28	4	11	23:48	BE	ROS	✓	49° 24.49	124° 22.09	343		-		RE	☒ ☐	reconfigure bottle
			23:54	BO			° 24.52	° 22.12		339	-			☐ ☐	fire to add end of
			23:59	EN			° 24.50	° 22.15			-			☐ ☐	sequence control
29	3	12	00:32		ROS	US	49° 26.63	124° 20.34	325		67 - 82	16	RE	☒ ☐	fire bottle 20 @
			00:38				° 26.68	° 20.41		317	-			☐ ☐	same depth as
			00:55				° 26.71	° 20.64			-			☐ ☐	bottle 13 (20m)
			:				° .	° .			-			☐ ☐	

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This page is for any notes or observations

bottle 13 not reliable, fire bottle 20 at 20 m for redundancy

13 DNF, 10 failed integrity test, 16 slr2 leak

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							Latitude	Longitude							
30	5	12	01:45	BE	ROS	—	49° 27.37	124° 30.82	318		-		KA	☒ ☐	
			01:51	BO			° 27.38	° 30.78		312	-			☐ ☐	
			01:56	EN			° 27.41	° 30.84			-			☐ ☐	
31	CPF 2	12	02:11	BE	NET		49° 28.02	124° 30.00	326		-		KY	☐ ☐	
			02:13	BO			° .02	° 29.99		50	-			☐ ☐	
			02:14	EN			° .03	° 29.99			-			☐ ☐	
32	CPF 2	12	02:20	BE	NET		49° 28.02	124° 30.00	331		-		KY	☐ ☐	
			02:30	BO			° 28.06	° 29.90		321	-			☐ ☐	
			02:35	EN			° 28.10	° 29.82			-			☐ ☐	
33	6	12	03:04	BE	ROS	US	49° 30.59	124° 27.84	194		83-95	13		☒ ☐	bottle 13 DNF
			03:07	BO			° 30.60	° 27.84		189	-			☐ ☐	used bottle 14
			03:18	EN			° 30.66	° 27.89			-			☐ ☐	for stc water
34	7	12	03:53	BE	ROS	—	49° 34.42	124° 24.21	354		-			☒ ☐	
			04:00	BO			° 34.42	° 24.22		350	-			☐ ☐	
			04:06	EN			° 34.43	° 24.22			-			☐ ☐	
35	8	12	04:59	BE	ROS	—	49° 39.26	124° 33.01	339		-			☒ ☐	
			05:05	BO			° 39.28	° 33.01		335	-			☐ ☐	
			05:11	EN			° 39.31	° 33.01			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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36	9	12	05:47	BE	ROS	US	49° 35.56	124° 38.30	170		96-107	12	PC	☒	
			05:50	BO			° 35.58	° 38.29		165	-			☐	
			06:01	EN			° 35.71	° 38.31			-			☐	
37	10	12	06:55	BE	ROS	/	49° 40.69	124° 47.30	96		-			☒	
			06:57	BO			° 40.69	° 47.31		91	-		SR	☐	
			06:59	EN			° 40.69	° 47.32			-			☐	
38	11	12	07:39	BE	ROS	/	49° 42.39	124° 43.44	303		-		SR	☒	
			07:45	BO			° 42.39	° 43.43		297	-			☐	
			07:50	EN			° 42.37	° 43.41			-			☐	
39	11	12	07:54	BE	NET	/	49° 42.37	124° 43.40	303		-		SR	☐	
			07:56	BO			49° 42.37	° 43.40		50	-			☐	
			07:58	EN			49° 42.37	° 43.40			-			☐	
40	11	12	08:04	BE	NET	/	49° 42.37	124° 43.40	303		-		SR	☐	
			08:13	BO			° 42.34	° 43.38		293	-			☐	
			08:18	EN			° 42.32	° 43.40			-			☐	
41	12	12	08:41	BE	ROS	US	49° 43.61	124° 40.81	358		108-123		SR	☒	
			08:48	BO			° 43.60	° 40.77			-			☐	
			09:02	EN			° 43.60	° 40.77			-			☐	
			:				°	°			-			☐	

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RBR vs CTD cont

Event #	time	depth	RBR
75	15:16	249	247.6
76	16:06		114.4
77	23:19	82	80
78	23:47	115	113.5
79	00:38	81	78 80.0
80	01:02	98	96.5
81	01:37	121	121
82	02:18	102	100.5
83	03:02	147	145.6
84	04:12	145	143.7
85	05:48	75	73.5
86	06:40	57	55.5
87	7:44	83	78.5
88	9:04	(167)	160.1

0.05% full scale accuracy

drift ~0.1%/yr typical

RBR correction: $(RBR + 0.8167)$

0.9937

"Rite in the Rain"

This page is for any notes or observations

weights RBR
SCOR SM NET SAMPLES (x2)
KIT BOX WET GEAR

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <i>April</i>				Year <i>2013</i>			Vessel <i>Vector</i>			Cruise ID <i>2013-12</i>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
<i>42</i>	<i>13</i>	<i>12</i>	<i>10:54</i>	<i>BE</i>	<i>ROS</i>	<i>/</i>	<i>49°55.30</i>	<i>124°55.18</i>	<i>242</i>		<i>-</i>		<i>SR</i>	☒ ☐	<i>Switched back to</i>
			<i>10:59</i>	<i>BO</i>			<i>°55.30</i>	<i>°55.16</i>		<i>237</i>	<i>-</i>			☐ ☐	<i>the trip mechanism</i>
			<i>11:03</i>	<i>EN</i>			<i>°55.30</i>	<i>°55.14</i>			<i>-</i>			☐ ☐	<i>that was failing on 11</i>
<i>43</i>	<i>14</i>	<i>12</i>	<i>11:35</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>49°52.99</i>	<i>124°59.63</i>	<i>318</i>		<i>124-138</i>	<i>15</i>	<i>SR</i>	☒ ☐	<i>fired bot 18@30m</i>
			<i>11:41</i>	<i>BO</i>			<i>°52.99</i>	<i>°59.64</i>			<i>-</i>			☐ ☐	<i>in case 11 didn't trip</i>
			<i>11:58</i>	<i>EN</i>			<i>°52.96</i>	<i>°59.62</i>			<i>-</i>			☐ ☐	<i>11 fired this time</i>
<i>44</i>	<i>15</i>	<i>12</i>	<i>12:35</i>	<i>BE</i>	<i>ROS</i>	<i>/</i>	<i>49°51.61</i>	<i>125° 1.60</i>	<i>130</i>		<i>-</i>		<i>SR</i>	☒ ☐	
			<i>12:37</i>	<i>BO</i>			<i>°51.60</i>	<i>° 1.59</i>		<i>125</i>	<i>-</i>			☐ ☐	
			<i>12:40</i>	<i>EN</i>			<i>°51.59</i>	<i>° 1.59</i>			<i>-</i>			☐ ☐	
<i>45</i>	<i>21</i>	<i>12</i>	<i>14:13</i>	<i>BE</i>	<i>ROS</i>	<i>-</i>	<i>50° 1.99</i>	<i>125° 13.61</i>	<i>75</i>		<i>-</i>		<i>SR</i>	☒ ☐	
			<i>14:15</i>	<i>BO</i>			<i>° 1.98</i>	<i>° 13.62</i>		<i>69</i>	<i>-</i>			☐ ☐	
			<i>14:16</i>	<i>EN</i>			<i>° 1.97</i>	<i>° 13.62</i>			<i>-</i>			☐ ☐	
<i>46</i>	<i>16</i>	<i>12</i>	<i>15:12</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>49°57.70</i>	<i>125° 8.84</i>	<i>157</i>		<i>-</i>		<i>SR</i>	☒ ☐	<i>Fired 12 in case 11</i>
			<i>15:15</i>	<i>BO</i>			<i>°57.72</i>	<i>° 8.85</i>		<i>152</i>	<i>139-149</i>	<i>12</i>		☐ ☐	<i>doesn't fire</i>
			<i>15:26</i>	<i>EN</i>			<i>°57.74</i>	<i>° 8.89</i>			<i>-</i>			☐ ☐	
<i>47</i>	<i>17</i>		<i>15:54</i>	<i>BE</i>			<i>49°58.78</i>	<i>125° 4.31</i>	<i>268</i>		<i>-</i>		<i>SR</i>	☒ ☐	
			<i>15:59</i>	<i>BO</i>			<i>°58.79</i>	<i>° 4.29</i>		<i>263</i>	<i>-</i>			☐ ☐	
			<i>16:05</i>	<i>EN</i>			<i>°58.79</i>	<i>° 4.29</i>			<i>-</i>			☐ ☐	
			<i>:</i>				<i>°</i>	<i>°</i>			<i>-</i>			☐ ☐	

Event Type:

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Notes:

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This page is for any notes or observations

I adjusted the tension on bot 11's lanyard, it fired this time, hopefully that fixed it.

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Month <u>APRIL</u>			Year <u>2013</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2013-12</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
48	18	12	16:32	BE	ROS	✓	49° 59.15	124° 58.90	150		-		SR	☒ ☐	
			16:35	BO			° 59.15	° 58.88		145	-			☐ ☐	
			16:38	EN			° 59.14	° 58.88			-			☐ ☐	
49	19	12	17:15	BE	ROS	✓	50° 1.19	124° 52.83	225		-		SR	☐ ☐	
			17:20	BO			° 1.19	° 52.82		272	-			☐ ☐	
			17:25	EN			° 1.19	° 52.80			-			☐ ☐	
50	20	12	19:33	BE	ROS	✓	49° 47.22	124° 32.35	310		-		R	☒ ☐	
			19:39	BO			° 47.20	° 32.33		309	-			☐ ☐	5 m off bottom
			19:44	EN			° 47.21	° 32.32			-			☐ ☐	
51	22	12	21:13	BE	ROS	✓	49° 40.21	124° 16.29	350		-			☐ ☐	
			21:19	BO			° 40.23	° 16.29		346	-			☐ ☐	
			21:25	EN			° 40.20	° 16.27			-			☐ ☐	
52	SCOR 22	12	21:31	BE	NET		49° 40.20	124° 16.30	350		-			☐ ☐	
			21:32	BO			° 40.19	° 16.26		50	-		KY	☐ ☐	SCOR net
			21:33	EN			° 40.19	° 16.25			-			☐ ☐	alt A Frame
53	SCOR 22	12	21:38	BE	NET		49° 40.18	124° 16.24	350		-			☐ ☐	
			21:49	BO			° 40.14	° 16.21		340	-			☐ ☐	
			21:55	EN			° 40.12	° 16.17			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>APRIL</u>			Year <u>2013</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2013-12</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
54	27	13	01:19	BE	ROS	US	49° 19.12	123° 48.01	350		150-165	16		☒ ☐	blowing 20 kts
			01:25	BO			° 19.14	° 47.98		342	-			☐ ☐	no chains
			01:42	EN			° 19.11	° 48.03			-			☐ ☐	bottle 11 misfire
55	26	13	02:21	BE	ROS	US	49° 14.30	123° 50.79	255		-			☒ ☐	
			02:26	BO			° 14.32	° 50.76		255	-			☐ ☐	5 m off bottom
			02:31	EN			° 14.33	° 50.79			-			☐ ☐	
56	GEO1	13	03:02	BE	NET		49° 15.02	123° 44.87	404		-			☐ ☐	
			03:04	BO			° 15.01	° 44.87		55	-			☐ ☐	Scor not off
			03:05	EN			° 15.01	° 44.87			-			☐ ☐	aft A-frame
57	GEO1	13	03:11	BE	NET		49° 14.99	123° 44.84	409		-			☐ ☐	
			03:24	BO			° 14.96	° 44.77		399	-			☐ ☐	
			03:31	EN			° 14.96	° 44.80			-			☐ ☐	
58	40	13	04:39	BE	ROS	/	49° 8.59	123° 36.82	153		-			☒ ☐	
			04:42	BO			° 8.62	° 36.76		146	-			☐ ☐	
			04:45	EN			° 8.66	° 36.73			-			☐ ☐	
59	39	13	05:09	BE	ROS	US	49° 9.83	123° 32.93	378		-			☒ ☐	
			05:16	BO			° 9.91	° 32.85		371	166-182	17		☐ ☐	fine bottle 20
			05:35	EN			° 10.13	° 32.56			-			☐ ☐	@ 50m & core
			:				°	°			-			☐ ☐	bottle 11 misfires

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hail, cold squall at end of sampling

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Month				Year		Vessel		Cruise ID							
APRIL				2013		VECTOR		2013-12							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
60	38	13	06:16	BE	ROS	-	49° 11.97	123° 26.41	309		-		(2)	☒ ☐	hand landing
			06:22	BO			° 11.98	° 26.44		300	-			☐ ☐	for rosette
			06:27	EN			° 12.03	° 26.38			-			☐ ☐	Scott to check
61	59	13	11:01	BE	ROS	us	48° 37.78	123° 14.60	236		183-196		sr	☒ ☐	
			11:07	BO			° 37.78	° 14.61			-			☐ ☐	
			11:20	EN			° 37.77	° 14.63			-			☐ ☐	
62	60	13	12:12	BE	ROS	/	48° 33.88	123° 12.79	296		-		sr	☒ ☐	
			12:17	BO			° 33.87	° 12.80		291	-			☐ ☐	
			12:23	EN			° 33.87	° 12.81			-			☐ ☐	
63	61	13	13:01	BE	ROS	/	48° 29.21	123° 9.19	275		-		sr	☒ ☐	
			13:06	BO			° 29.20	° 9.18		270	-			☐ ☐	
			13:11	EN			° 29.20	° 9.19			-			☐ ☐	
64	67	13	15:09	BE	ROS	/	48° 22.80	123° 18.12	108		-		sr	☒ ☐	
			15:12	BO			° 22.81	° 18.16		103	-			☐ ☐	
			15:14	EN			° 22.84	° 18.23			-			☐ ☐	
65	70	14	03:10	BE	ROS	/	48° 19.22	123° 43.22	147		-		(2)	☒ ☐	air temp 5.5°C
			03:13	BO			° 19.23	° 43.21		145	-			☐ ☐	
			03:15	EN			° 19.24	° 43.21			-			☐ ☐	
			:				°	°			-			☐ ☐	

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0900 Anchor off William Head to wait out the weather

1900 Weigh anchor, proceed via Rose Passage to station 70

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Month <u>April</u>				Year <u>2013</u>			Vessel <u>Vector</u>				Cruise ID <u>2013-12</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
66	69	14	03:47	BE	ROS	US	48° 15.64	123° 43.19	179		197-208	12	Re	☒	
			03:50	BO			° 15.63	° 43.19		176	-			☐	
			04:00	EN			° 15.56	° 43.18			-			☐	
67	68	14	04:37	BE	ROS	/	48° 12.13	123° 43.15	138		-		Re	☒	airtemp 6.5 °C
			04:41	BO			° 12.12	° 43.21		133	-			☐	wind stiller during
			04:43	EN			° 12.11	° 43.23			-			☐	downcast @ 60 m
68	73	14	06:31	BE	ROS	-	48° 15.00	124° 6.68	160		-		Re	☒	
			06:34	BO			° 15.05	° 6.71		157	-			☐	
			06:37	EN			° 15.08	° 6.72			-			☐	
69	72	14	07:13	BE	ROS	US	48° 18.63	124° 3.98	190		209-221	13	SR	☒	
			07:17	BO			° 18.64	° 3.97		186	-			☐	
			07:31	EN			° 18.67	° 3.94			-			☐	
70	71	14	08:08	BE	ROS	/	48° 22.21	123° 59.38	111		-		SR	☐	
			08:10	BO			° 22.22	° 59.36		106	-			☐	
			08:12	EN			° 22.23	° 59.36			-			☐	
71	76	14	10:39	BE			48° 31.35	124° 30.14	98		-		SR	☒	
			10:41	BO			° 31.32	° 30.19		92	-			☐	
			10:43	EN			° 31.30	° 30.23			-			☐	
			:				°	°			-			☐	

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Month <u>APRIL</u>				Year <u>2013</u>			Vessel <u>VECTOR</u>				Cruise ID <u>2013-12</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
72	75	14	11:16	BE	ROS	US	48°28.16	124°32.78	226		222-235	14	SR	☒ ☐	Went down slowly
			11:22	BO			°28.09	°32.67			-			☐ ☐	due to weather
			11:37	EN			°27.97	°32.41			-			☐ ☐	
73	74	14	12:47	BE	ROS	/	48°25.03	124°35.74	178		-	/	SR	☒ ☐	
			12:53	BO			°25.06	°35.94		174	-			☐ ☐	
			12:56	EN			°25.07	°36.02			-			☐ ☐	
74	101	14	14:02	BE	ROS	/	48°25.58	124°45.35	262		-		SR	☒ ☐	
			14:11	BO			°25.60	°45.64		254	-			☐ ☐	
			14:16	EN			°25.60	°45.78			-			☐ ☐	
75	102	14	15:09	BE	ROS	us	48°30.02	124°44.04	256		236 - 250	14	SR	☒ ☐	
			15:16	BO			48°30.01	124°44.02		249	-			☐ ☐	
			15:30	EN			°29.94	°43.92			-			☐ ☐	
76	103	14	16:03	BE	ROS	/	48°32.99	124°42.99			-	/	SR	☐ ☐	
			16:06	BO			°32.99	°42.99			-			☐ ☐	
			16:08	EN			°32.98	°43.00			-			☐ ☐	
77	105	14	23:18	BE	ROS	/	48°10.99	123°18.88	85		-		PC	☒ ☐	14°C air temp
			23:19	BO			°10.99	°18.88		82	-			☐ ☐	
			23:21	EN			°10.98	°18.88			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>APRIL</u>				Year <u>2013</u>		Vessel <u>VECTOR</u>				Cruise ID <u>2013-17</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
78	ADCP	14	23:44	BE	ROS	US	48° 13.97	123° 17.97	120		251 - 260	10	fe	☒ ☐	
			23:47	BO			° 13.98	° 17.93		115	-			☐ ☐	
			23:54	EN			° 13.90	° 17.94			-			☐ ☐	
79	104	15	00:35	BE	ROS	-	48° 19.99	123° 17.95	87		-			☒ ☐	
			00:38	BO			° 19.99	° 17.95		81	-			☐ ☐	
			00:40	EN			° 19.99	° 17.94			-			☐ ☐	
80	66	15	01:00	BE	ROS	-	48° 19.32	123° 14.08	103		-			☒ ☐	
			01:02	BO			° 19.32	° 14.07		98	-			☐ ☐	
			01:04	EN			° 19.32	° 14.06			-			☐ ☐	
81	65	15	01:35	BE	ROS	US	48° 15.96	123° 9.76	125		261 - 270			☒ ☐	air temp 8°C
			01:37	BO			° 16.00	° 9.73		121	-	10		☐ ☐	
			01:45	EN			° 15.98	° 9.69			-			☐ ☐	
82	64	15	02:16	BE	ROS	-	48° 12.80	123° 5.76	105		-			☒ ☐	
			02:18	BO			° 12.82	° 5.73		102	-			☐ ☐	
			02:20	EN			° 12.83	° 5.73			-			☐ ☐	
83	63	15	02:59	BE	ROS	-	48° 14.62	122° 58.47	151		-			☒ ☐	
			03:02	BO			° 14.68	° 58.46		147	-			☐ ☐	
			03:05	EN			° 14.71	° 58.47			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
 CTD = Standalone CTD
 ROS = CTD in Rosette
 SET = Fish Set

LOOP = Sea Water Loop

MOR = Mooring
 NET = Plankton Net Haul
 DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>APRIL</u>			Year <u>2013</u>		Vessel <u>VECTOR</u>		Cruise ID <u>2013-12</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
84	62	15	04:08	BE	ROS	US	48° 22.81	123° 2.58	148		271 - 281		PC	☒	
			04:12	BO			° 22.80	° 2.58		145	-	11		☐	
			04:21	EN			° 22.75	° 2.57			-			☐	
85	54	15	05:46	BE	ROS	/	48° 26.59	122° 44.32	78		-			☒	
			05:48	BO			° 26.59	° 44.32		75	-			☐	
			05:49	EN			° 26.59	° 44.33			-			☐	
86	53	15	06:39	BE	ROS	/	48° 33.19	122° 44.99	60		-			☒	
			06:40	BO			° 33.19	° 44.99		57	-			☐	
			06:41	EN			° 33.19	° 44.99			-		✓	☐	
87	52		07:42				48° 38.89	122° 43.30	88		-		SR	☒	
			07:44				° 38.89	° 43.28		83	-			☐	
			07:45				° 38.89	° 43.26			-			☐	
88	51		09:01				48° 46.70	122° 51.70	167		-		SR	☒	
			09:04				° 46.71	122° 51.73			-			☐	
			09:07				° 46.71	° 51.76			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	

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