

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2014 - 06

DATE:

From: 2 APRIL 2014 To: 5 APRIL 2014

VESSEL:

VECTOR

PROJECT(S):

WATER PROPERTIES SURVEY
JUAN DE FUCA / STRAIT OF GEORGIA

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

WaterProperties.ca

**** 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: Vector CTD Laptop

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 0619

Primary CTD

Make: SBE model: 9+ serial number: 385

Primary temperature serial number: 4054

Primary conductivity serial number: 1766

Secondary temperature serial number: 4700

Secondary conductivity serial number: 3321

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Wet Labs FLO Cable gain: 13 s/n: 7216 P, S or NO pump?

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

Oxygen sensor: _____ Model: 43 s/n: 1119 P, S or NO pump?

PAR sensor: _____ Model: 4615 Surface PAR? Y / N

Other sensors: DT 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-rossette casts (e.g., W.E. Ricker)

Rosette Setup:

Number of bottles: _____
Manufacturer: _____
Volume of bottles (litres): _____

Winches:

1. Make: _____ Model: _____ Serial #: _____ Used for: _____
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Salinometer:

Make: _____ Model: _____ Serial Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Oxygen Kit(s):

Make: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Thermosalinograph System (SBE21):

Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

ADCP Setup:

Computer time zone: _____ 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 on performance during cruise (comments should also be reflected in the post-cruise report):

CTD Test Cast Information

Test Cast along side? Yes ☐ No ☒

Comments _____

Test Cast in Saanich Inlet or other location? Yes ☒ No ☐

Comments _____

CTD pressure reading on deck (db), before cast: 0.56 after cast: _____

Pumps working? Yes ☒ (0011) No ☐ (0010)

Secondary Temp – Primary Temp: 9.1 °C
(Average from the mixed region)

Secondary Salinity – Primary Salinity: 28.3
(Average from the mixed region)

Additional Comments:

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Month				Year			Vessel			Cruise ID					
APRIL				2014			VECTOR			2014-06					
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
1	51	3	02:02	BE	ROS	US	48°39.11	123°30.58	182	150	1 - 9	9	PC	☒ ☒	Two files, one
			02:05	BO			°39.10	°30.59			-			☐ ☐	down, one up
			02:22	EN			°39.10	°30.63			-			☐ ☐	from 100 db
2	58	3	04:00	BE	ROS		48°42.99	123°14.20	331		-		PC	☒ ☒	
			04:08	BO			°43.00	°14.20		320	-			☐ ☐	alt @ 6 m
			04:15	EN			°42.96	°14.19			-			☐ ☐	long stay alt
3	59	3	05:04	BE	ROS	US	48°37.81	123°14.63	231		10 - 23	14	PC	☒ ☒	
			05:09	BO			°37.80	°14.60		227	-			☐ ☐	
			05:24	EN			°37.78	°14.61			-			☐ ☐	
4	60	3	06:20	BE	ROS		48°33.91	123°12.80	292		-		PC	☒ ☒	7.2° AIR TEMP
			06:25	BO			°33.91	°12.82		294	-			☐ ☐	
			06:30	EN			°33.91	°12.83			-			☐ ☐	
5	61	3	07:20	BE	ROS		48°29.26	123°9.10	214		-		PC	☒ ☒	34 m shell on
			07:27	BO			°29.23	°9.13		232	-			☐ ☐	altimeter
			07:31	EN			°29.23	°9.14			-			☐ ☐	- usually 274 m alt this str
6	101	3	15:06	BE	ROS		48°25.51	124°45.35	260		-		SR	☒ ☒	
			15:10	BO			°25.56	°45.55		255	-			☐ ☐	
			15:16	EN			°25.68	°45.76			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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 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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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

Produced by the Water Properties Group, IOS

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- test system at sfc: 'pump on' signal on dede unit non responsive until connections to dede unit tightened
Fired all bottles at the surface for integrity tests

- chl samples 6A, 6B, 7A, 7B not processed, vacuum pump settings adjusted, only 9A-9B survived

- proceed to station 101, syringes on, sampling box ready for st 102; green org box

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7	102	3	15:54	BE	ROS	US	48°30.04	124°44.00	255		25-37			☒ ☒	Nothing to report (NTR)
			15:59	BO			°30.15	°44.03		250	-			☐ ☐	
			16:17	EN			°30.50	°44.21			-			☐ ☐	
8	103	3	16:45	BE	ROS		48°33.00	124°42.87	120		-			☒ ☒	NTR
			16:47	BO			°32.99	°42.88		116	-			☐ ☐	
			16:48	EN			°32.97	°42.89			-			☐ ☐	
9	76	3	17:52	BE	ROS		48°31.43	124°30.00	83		-			☒ ☒	NTR
			17:54	BO			°31.45	°29.99		81	-			☐ ☐	
			17:56	EN			°31.49	°30.00			-			☐ ☐	
10	75	3	18:29	BE	ROS	US	48°28.23	124°32.84	225		-			☒ ☒	SWD = 221
			18:34	BO			°28.20	°32.93		222	38-51			☐ ☐	
			:	EN			°28.	°33.			-			☐ ☐	
11	74	3	19:17	BE	ROS		48°25.14	124°36.61	187		-		RL	☒ ☒	AIR TEMP 8.2°C
			19:23	BO			°25.14	°36.61		185	-		RL	☐ ☐	
			19:26	EN			°25.14	°36.62			-		KS	☐ ☐	
12	73	3	21:50	BE	ROS		48°14.96	124°6.63	160		-		Re	☒ ☒	
			21:58	BO			°14.88	°6.36		155	-			☐ ☐	
			22:01	EN			°14.85	°6.26			-			☐ ☐	
			:				°	°			-			☐ ☐	

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activate Tom's Inflers @ 0930 local ; 1630 UTC

- deploy both Inflers over side

- 1 m sea/swell

- winds from east 15-20 knots

- ebb tide

0951 ; 1651 UTC

48° 32.969' N 124 42.888' W

- gps signal good when on deck
(not in lab)

@ 9:40 Infler 4 flashing 1 light
3 2 lights

- 0945 both 1 light flashing

- 0950 both 0 light flash

- 0951 deploy overboard
1 m separation

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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							
13	72	3	22:31	BE	ROS	US	48° 18.60	124° 4.02	186		52-6A		PC	☒ ☒	
			22:37	BO			° 18.58	° 4.01		183	-	13		☐ ☐	
			22:44	EN			° 18.53	° 3.96			-			☐ ☐	
14	71	3	23:36	BE	ROS		48° 22.17	123° 59.37	108		-		PC	☒ ☒	
			23:42	BO			° 22.17	° 59.37		106	-			☐ ☐	
			23:44	EN			° 22.17	° 59.37			-			☐ ☐	
15	70	4	00:47	BE	ROS		48° 19.21	123° 43.11	150		-		PC	☒ ☒	
			00:57	BO			° 19.17	° 43.15		148	-			☐ ☐	
			01:00	EN			° 19.17	° 43.15			-			☐ ☐	
16	69	4	01:25	BE	ROS	US	48° 15.59	123° 43.14	177		65-76		PC	☒ ☒	
			01:32	BO			° 15.57	° 43.14		174	-	12		☐ ☐	
			01:42	EN			° 15.54	° 43.10			-			☐ ☐	
17	68	4	02:22	BE	ROS		48° 12.19	123° 42.97	138		-		PC	☒ ☒	
			02:25	BO			° 12.19	° 42.99		136	-			☐ ☐	
			02:28	EN			° 12.19	° 42.98			-			☐ ☐	
18	105	4	04:00	BE	ROS		48° 11.00	123° 18.96	84		-		PC	☒ ☒	AIR TEMP 8.6°C
			04:03	BO			° 11.00	° 18.96		82	-			☐ ☐	
			04:05	EN			° 11.00	° 18.96			-			☐ ☐	
			:				°	°			-			☐ ☐	

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note: Event 13 - str 72
DIC Sampling Delay in stoppering bottles - gas exchange?

- #SAMPLE 52 - redone stoppered immediately, follow up sample
- 54 - 2 bottles, delay in stopper installation
- 56 - 1 bottle delay "
- 57 - 1 bottle delay "
- 58 - 1 bottle delay "
- 60 - 2 bottles delay "
- 61 - 1 bottle delay
- 62 - No delay - stoppered immediately
- 63 - No delay - stoppered immediately
- 64 - No delay - stoppered immediately

- Ron Lindsay Apr 3/14.

- event 16, Station 69, duplicates at all depths for oxygen, missing chls at bottle 9

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							Latitude	Longitude							
19	ADCP	4	04:33	BE	ROS	US	48° 13.95	123° 18.07	120		77-86		R	☒ ☒	
			04:37	BO			° 13.96	° 18.05		115	-	10	R	☐ ☐	
			04:45	EN			° 13.97	° 18.04			-		KS	☐ ☐	
20	104	4	05:33	BE	ROS		48° 19.94	123° 17.98	85		-		R	☒ ☒	
			05:36	BO			° 19.94	° 18.00		82	-			☐ ☐	
			05:37	EN			° 19.94	° 18.00			-			☐ ☐	
21	67	4	06:03	BE	ROS		48° 22.83	123° 18.17	103		-		R	☒ ☒	
			06:06	BO			° 22.82	° 18.18		101	-			☐ ☐	
			06:08	EN			° 22.81	° 18.19			-			☐ ☐	
22	66	4	06:45	BE	ROS		48° 19.29	123° 14.08	101		-		R	☒ ☒	
			06:46	BO			° 19.30	° 14.08		98	-			☐ ☐	
			06:47	EN			° 19.29	° 14.07			-			☐ ☐	
23	65	4	07:23	BE	ROS	US	48° 15.87	123° 9.81	127		87-96			☒ ☒	No DO's on this
			07:26	BO			° 15.88	° 9.85		124	-	10		☐ ☐	rosette, otherwise
			07:36	EN			° 15.91	° 9.99			-			☐ ☐	WTR
24	64	4	08:16	BE	ROS		48° 12.81	123° 5.71	109		-			☒ ☒	New winch operator
			08:18	BO			° 12.81	° 5.71		105	-			☐ ☐	bit of a delay @
			08:20	EN			° 12.81	° 5.70			-			☐ ☐	the start.
			:				°	°			-			☐ ☐	

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Month <u>April</u>			Year <u>2014</u>			Vessel <u>Vector</u>			Cruise ID <u>2014-06</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
25	63	4	08:59	BE	ROS		48°14.65	122°58.39	151		-		SR	☒ ☒	NTR
			09:02	BO			°14.65	°58.40		147	-			☐ ☐	
			09:05	EN			°14.67	°58.42			-			☐ ☐	
26	62	4	10:13	BE	ROS		48°22.81	123°2.64	148		97-107	11	SR	☒ ☒	NTR
			10:16	BO			°22.81	°2.64		145	-			☐ ☐	
			10:27	EN			°23.04	°2.77			-			☐ ☐	
27	54	4	12:10	BE	ROS		48°26.70	122°44.34	78		-		SR	☒ ☒	NTR
			12:12	BO			°26.69	°44.34		75	-			☐ ☐	
			12:13	EN			°26.70	°44.34			-			☐ ☐	
28	53	4	13:01	BE	ROS		48°33.23	122°44.99	61		-		SR	☒ ☒	NTR
			13:02	BO			°33.24	°44.99		56	-			☐ ☐	
			13:03	EN			°33.25	°44.99			-			☐ ☐	
29	52	4	14:11	BE	ROS		48°38.94	122°43.43	104		-		SR	☒ ☒	NTR
			14:13	BO			°38.95	°43.45		101	-			☐ ☐	
			14:15	EN			°38.95	°43.46			-			☐ ☐	
30	51	4	15:44	BE	ROS		48°46.59	122°51.58	157		-		SR	☒ ☒	NTR
			15:47	BO			°46.55	°51.57		154	-			☐ ☐	
			15:50	EN			°46.51	°51.57			-			☐ ☐	
			:				°	°			-			☐ ☐	

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31	57	4	17:15	BE	ROS		48°43.90	123° 8.28	172		-	14	SR	☒ ☒	NTR
			17:18	BO			°43.88	° 8.37		168	-			☐ ☐	
			17:21	EN			°43.85	° 8.44			-			☐ ☐	
32	56	4	18:04	BE	ROS	US	48°46.31	123° 1.52	230		108-121	14		☒ ☒	NTR
			18:09	BO			° 46.29	° 1.49		230	-			☐ ☐	
			18:23	EN			° 46.32	° 1.51			-			☐ ☐	
33	47	4	19:15	BE	ROS		48°49.27	123° 6.19	182		-			☒ ☒	NTR
			19:20	BO			° 49.29	° 6.19		180	-			☐ ☐	
			19:23	EN			° 49.29	° 6.18			-			☐ ☐	
34	48	4	19:50	BE	ROS		48°51.73	123° 3.19	226		-		R	☒ ☒	AIR TEMP 10°C
			19:54	BO			° 51.75	° 3.17		223	-			☐ ☐	
			19:58	EN			° 51.74	° 3.17			-			☐ ☐	
35	49	4	20:32	BE	ROS		48°55.03	122°59.55	130		-		R	☐ ☐	SPAR 1.6
			20:34	BO			° 55.03	° 59.54		126	-			☐ ☐	REL PAR 38x10 ³
			20:36	EN			° 55.02	° 59.53			-			☐ ☐	
36	50	4	21:03	BE	ROS		48°57.70	122°55.97	26		-		R	☒ ☒	dodge the
			21:07	BO			° 57.71	° 55.93		23	-			☐ ☐	crab traps
			21:07	EN			° 57.71	° 55.93			-			☐ ☐	mostly commercial
			:				° .	° .			-			☐ ☐	

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37	44	4	22:00	BE	ROS		48° 56.74	123° 6.04	115		-		R	☑☑	big fluorescence
			22:04	BO			° 56.72	° 6.05		114	-		KS	☐☐	signal > 16 mg/m ³
			22:05	EN			° 56.71	° 6.06			-		RL	☐☐	
38	45	4	22:31	BE	ROS		48° 53.86	123° 8.43	125		-		R	☑☑	NTR
			22:34	BO			° 53.86	° 8.44		123	-			☐☐	
			22:36	EN			° 53.86	° 8.44			-			☐☐	
39	46	4	22:59	BE	ROS	US	48° 51.39	123° 10.81	177		122-133		R	☑☑	no big chl signal
			23:03	BO			° 51.40	° 10.79		173	-	12		☐☐	max 2 mg/m ³
			23:13	EN			° 51.41	° 10.80			-			☐☐	
40	106	5	00:31	BE	ROS		49° 1.00	123° 13.24	75		-		R	☑☑	fluorescence max
			00:33	BO			° 1.01	° 13.22		71	-			☐☐	~12 mg/m ³
			00:34	EN			° 1.01	° 13.21			-			☐☐	
41	107	5	01:10	BE	ROS		48° 58.41	123° 17.99	180		-		R	☑☑	-KS another set
			01:13	BO			° 58.41	° 17.99		176	-			☐☐	of fluorometer readings
			01:16	EN			° 58.40	° 17.99			-			☐☐	
42	43	5	02:10	BE	ROS		49° 0.20	123° 30.08	197		-		R	☑☑	AIR TEMP 8.5°C
			02:15	BO			° 0.21	° 30.11		194	-			☐☐	
			02:18	EN			° 0.20	° 30.10			-			☐☐	
			:				° .	° .			-			☐☐	
Event Type: LOOP = Sea Water Loop Bottle Firing Method: Time Code:															

Event Type:

BOT = Bottle cast (no CTD)
 CTD = Standalone CTD
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Bottle Firing Method:

US = Up / Stop (default)
 UN = Up / No stop
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Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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Month <u>APRIL</u>				Year <u>2014</u>		Vessel <u>VESSEL</u>				Cruise ID <u>2014 06</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
43	42	5	02:42	BE	ROS	US	49° 1.79	123° 26.17	320		134-149		PL	☒ ☒	20 m sfc layer
			02:48	BO			° 1.79	° 26.21		315	-	16	RL	☐ ☐	
			03:04	EN			° 1.80	° 26.24			-		KS	☐ ☐	
44	41	5	03:55	BE	ROS		49° 3.28	123° 22.32	245		-			☒ ☒	> 20 mg/m ³
			03:59	BO			° 3.28	° 22.32		241	-			☐ ☐	fluorescence
			04:04	EN			° 3.27	° 22.30			-			☐ ☐	@ ~10 m
45	41	5	04:14	BE	NET		49° 3.24	123° 22.35	245		-			☐ ☐	vertical scow net
			04:22	BO			° 3.27	° 22.44		240	-			☐ ☐	6-5 → sfc →
			04:26	EN			° 3.23	° 22.44			-			☐ ☐	0.5 m/s ↓; 1.0 m/s ↑
46	108	5	04:51	BE	ROS		49° 4.39	123° 19.09	90		-			☒ ☒	fluorescence spikes
			04:53	BO			° 4.32	° 19.07		85	-			☐ ☐	to 27 mg/m ³
			04:54	EN			° 4.37	° 19.06			-			☐ ☐	
47	37	5	05:55	BE	ROS		49° 13.60	123° 20.69	215		-			☒ ☒	NTR
			06:00	BO			° 13.55	° 20.68		210	-			☐ ☐	
			06:04	EN			° 13.54	° 20.68			-			☐ ☐	
48	38	5	06:37	BE	ROS		49° 11.99	123° 26.41	310		-			☒ ☒	altimeter dropper
			06:43	BO			° 12.05	° 26.45		305	-			☐ ☐	out close to
			06:48	EN			° 12.00	° 26.44			-			☐ ☐	bottom
			:				° .	° .			-			☐ ☐	

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This page is for any notes or observations

TSK 3001

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Month <u>APRIL</u>			Year <u>2014</u>		Vessel <u>Vector</u>			Cruise ID <u>2014-06</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							
49	39	5	07:29	BE	ROS	US	49° 9.78	123° 33.01	380		150-166	17	SR	☒ ☒	PAR cap was left
			07:36	BO			° 9.77	° 33.05		375	-			☐ ☐	on the rosette
			07:59	EN			° 9.72	° 33.07			-			☐ ☐	was brought back
50	40	5	08:23	BE	ROS		49° 8.59	123° 36.79	157		-		SR	☒ ☒	NTR
			08:27	BO			° 8.60	° 36.78		153	-			☐ ☐	
			08:31	EN			° 8.61	° 36.77			-			☐ ☐	
51	26	5	09:43	BE	ROS		49° 14.33	123° 50.87	257		-		SR	☒ ☒	NTR
			09:47	BO			° 14.33	° 50.87		252	-			☐ ☐	
			09:52	EN			° 14.34	° 50.86			-			☐ ☐	
52	GE01	5	10:30	BE	NET		49° 15.02	123° 44.84	403		-		SR	☐ ☐	NTR
			10:45	BO			° 15.14	° 44.94		394	-			☐ ☐	
			10:52	EN			° 15.21	° 44.97			-			☐ ☐	
53	27	5	11:27	BE	ROS		49° 19.23	123° 47.87	365		167-182	16	SR	☒ ☒	SPAR co-effs
			11:35	BO			° 19.31	° 47.81		360	-			☐ ☐	in con file now!
			11:53	EN			° 19.51	° 47.68			-			☐ ☐	
54	28	5	12:29	BE	ROS		49° 24.20	123° 45.41	134		-			☐ ☐	
			12:32	BO			° 24.21	° 45.41		129	-			☒ ☒	NTR
			12:34	EN			° 24.27	° 45.45			-			☐ ☐	
			:				°	°			-			☐ ☐	

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out of the water to remove it, but the transmissometer + Thermometer were not cleaned again.
* Surface par values were not entered in the con file for any cast ***

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Month <u>April</u>			Year <u>2014</u>			Vessel <u>Vector</u>			Cruise ID <u>2014-06</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
55	24	5	14:03	BE	ROS		49°30.26	124° 6.01	429		-		SR	☒ ☒	NTR
			14:12	BO			°30.35	° 5.90		424	-			☐ ☐	
			14:19	EN			°30.45	° 5.95			-			☐ ☐	
56	25	5	14:47	BE	ROS		49°27.70	124° 7.47	290		-		SR	☒ ☒	NTR
			14:53	BO			°27.74	° 7.46		287	-			☐ ☐	
			14:58	EN			°27.72	° 7.48			-			☐ ☐	
57	2	5	15:29	BE	ROS	US	49°24.11	124° 9.34			183-197	15	SR	☒ ☒	NTR
			15:35	BO			°24.06	° 9.36		278	-			☐ ☐	
			15:51	EN			°23.94	° 9.29			-			☐ ☐	
58	CPF1	5	16:24	BE	NET1		49°21.99	124° 5.12	245		-		SR	☐ ☐	NTR
			16:33	BO			°21.98	° 5.09		231	-			☐ ☐	
			16:37	EN			°21.97	° 5.05			-			☐ ☐	
59	CPF1	5	16:45	BE	NET2		49°21.97	° 5.04	245		-		SR	☐ ☐	No hose pressure
			16:48	BO			°21.95	° 5.01		50	-			☐ ☐	for 5 mins while
			16:50	EN			°21.96	° 5.02			-			☐ ☐	net was hanging
60	1	5	17:30	BE			49°20.20	124° 12.15	240		-			☒ ☒	
			17:35	BO			°20.23	° 12.13		235	-			☐ ☐	
			17:39	EN			°20.27	° 12.08			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Notes:

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Month			Year			Vessel				Cruise ID					
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
61	4	5	18:42	BE	ROS		49° 24.75	124° 21.95	350		-		SR	☒ ☒	watch change
			18:49	BO			° 24.78	° 21.90			-			☐ ☐	recovered by
			18:55	EN			° 24.77	° 21.90			-			☐ ☐	RE VS RL
62	3	5	19:14	BE	ROS	US	49° 26.60	124° 20.20	322		198-213	16	RE	☒ ☒	no oxygen
			19:20	BO			° 26.62	° 20.18		317	-			☐ ☐	samples
			19:36	EN			° 26.59	° 20.17			-			☐ ☐	
63	BS17	5	21:40	BE	ROS	US	49° 29.07	124° 45.94	58		-		RE	☒ ☒	lighter SPAR commin
			21:42	BO			° .06	° .93		55	-			☐ ☐	on deck unit, pole
			21:49	EN			° .03	° .89			-			☐ ☐	still o of line
64	5	5	23:09	BE	ROS		49° 27.42	124° 30.77	315		-		RE	☒ ☒	chains/light on
			23:15	BO			° 27.45	° 30.75		305	-			☐ ☐	-SPAR seems better
			23:20	EN			° 27.44	° 30.75			-			☐ ☐	
65	CPF2	5	23:36	BE	NET		49° 28.02	124° 29.96	324		-			☐ ☐	- wind gusts > 20
			23:38	BO			° 28.01	° 29.95		50	-			☐ ☐	dr 1/2 m
			23:40	EN			° 28.01	° 29.95			-			☐ ☐	up 1 m
66	CPF2	5	23:46	BE	NET		49° 27.99	124° 29.97	325		-			☐ ☐	wind dropping
			23:57	BO			° 27.97	° 29.97		325	-			☐ ☐	net still up & on
			00:02	EN			° 27.97	° 29.93			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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- lumpy & sandy, chains on @ str 5

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Month				Year		Vessel		Cruise ID							
APRIL				2014		VECTOR		2014 06							
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
67	6	6	00:54	BE	ROS	US	49° 30.64	124° 27.75	190		222-234			☒ ☒	Lonely during sampling
			00:58	BO			° 30.62	° 27.73		186	-	13		☐ ☐	
			01:10	EN			° 30.64	° 27.70			-			☐ ☐	
68	7	6	01:40	BE	ROS		49° 34.42	124° 24.22	350		-			☒ ☒	NTR
			01:47	BO			° 34.43	° 24.20		346	-			☐ ☐	
			01:53	EN			° 34.42	° 24.21			-			☐ ☐	
69	8	6	02:44	BE	ROS		49° 39.31	124° 32.98	340		-			☒ ☒	show s/c fluorometer
			02:48	BO			° 39.31	° 32.99		335	-			☐ ☐	top 20 m; 9 m ³ /min
			02:54	EN			° 39.33	° 32.99			-			☐ ☐	
70	9	6	03:31	BE	ROS	US	49° 35.50	124° 38.26	168		-			☒ ☒	NTR
			03:34	BO			° 35.49	° 38.28		164	-			☐ ☐	
			03:45	EN			° 35.48	° 38.27			-			☐ ☐	
71	10	6	04:41	BE	ROS		49° 40.70	124° 47.25	99		-			☒ ☒	NTR
			04:44	BO			° 40.72	° 47.26		95	-			☐ ☐	
			04:45	EN			° 40.73	° 47.26			-			☐ ☐	
72	11	6	05:09	BE	ROS		49° 42.43	124° 43.45	300		-			☒ ☒	altimeter drops
			05:15	BO			° 42.43	° 43.45		299	-			☐ ☐	out in last 5-7
			05:20	EN			° 42.40	° 43.45			-			☐ ☐	m from bottom
			:				°	°			-			☐ ☐	

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Notes:

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Month <u>APRIL</u>			Year <u>2014</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2014-06</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
73	12	6	05:40	BE	ROS	US	49°43.62	124°40.85	357		247-262	17	PC	☒ ☒	fine bottle 18
			05:47	BO			°43.62	°40.82		351	-			☐ ☐	at 300 m
			06:05	EN			°43.60	°40.81			-			☐ ☐	
74	NETN11	6	07:05	BE	NE		49°42.38	124°43.40	302		-		SR	☐ ☐	NTR
			07:14	BO			°42.38	°43.35		297	-			☐ ☐	
			07:19	EN			°42.36	°43.30			-			☐ ☐	
75	13	6	09:05	BE	ROS		49°55.43	124°55.30	239		-		SR	☒ ☒	NTR
			09:10	BO			°55.43	°55.30		235	-			☐ ☐	
			09:14	EN			°55.45	°55.30			-			☐ ☐	
76	12 14 6.5	6	09:45	BE	ROS	US	49°52.96	124°59.76	313		263-277		SR	☒ ☒	NTR
			09:51	BO			°52.90	°59.90		309	-			☐ ☐	
			10:11	EN			°52.80	° 0.12			-			☐ ☐	
77	15	6	10:38	BE	ROS		49°51.58	125° 1.56	131		-		SR	☒ ☒	NTR
			10:41	BO			°51.56	° 1.55		128	-			☐ ☐	
			10:43	EN			°51.57	° 1.55			-			☐ ☐	
78	16	6	11:36	BE	ROS	US	49°57.82	125° 8.74			-			☒ ☒	
			11:39	BO			°57.82	° 8.75			-			☐ ☐	
			11:57	EN			°57.81	° 8.76			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>April</u>				Year <u>2014</u>			Vessel <u>Vector</u>			Cruise ID <u>2014-06</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
79	17	6	12:20	BE	ROS		49° 58.72	125° 4.27	263		-		SR	☒ ☒	NTR
			12:25	BO			° 58.80	° 4.24		262	-			☐ ☐	
			12:30	EN			° 58.81	° 4.24			-			☐ ☐	
80	18	6	12:59	BE	ROS		49° 59.22	124° 58.88	146		-			☒ ☒	NTR
			13:02	BO			° 59.23	° 58.87		141	-			☐ ☐	
			13:05	EN			° 59.25	° 58.86			-			☐ ☐	
81	19	6	14:05	BE	ROS		50° 1.23	124° 52.97	282		-			☒ ☒	NTR
			14:10	BO			° 1.22	° 53.00		284	-			☐ ☐	
			14:15	EN			° 1.20	° 52.99			-			☐ ☐	
82	21	6	17:16	BE	ROS		50° 2.00	125° 13.53	76		-		☒	☒	tidal current
			17:17	BO			° 1.89	° 13.50			-			☐ ☐	
			17:19	EN			° 1.84	° 13.48			-			☐ ☐	
83	20		20:57	BE			49° 47.18	124° 32.32	312		-		☒	☒	"go pro" test
			20:58	BO			° 47.18	° 32.32		30	-			☐ ☐	1/2 ms'
			21:00	EN			° 47.18	° 32.33			-			☐ ☐	
84	20		21:03	BE			49° 47.19	124° 32.31	312		-			☐ ☐	the 'real' cast
			21:09	BO			° 47.15	° 32.24		311	-			☐ ☐	
			21:15	EN			° 47.09	° 32.19			-			☐ ☐	
			:				°	°			-			☐ ☐	

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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			Year			Vessel			Cruise ID						
APRIL			2014			VECTOR			2014 06						
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
85	22	6	22:37	BE	ROS		49° 40.20	124° 16.35	352		-		R	☒ ☒	"go po" test #2
			22:39	BO			° 40.20	° 16.34		50	-			☐ ☐	1.0 mS
			22:41	EN			° 40.21	° 16.34			-			☐ ☐	fine bottle 20, 21
86	22	6	22:44	BE	ROS		49° 40.21	124° 16.32	352		-			☐ ☐	
			22:51	BO			° 40.21	° 16.30		348	-			☐ ☐	AIR TEMP 2.7°C
			22:57	EN			° 40.21	° 16.30			-			☐ ☐	
87	N22	6	23:02	BE	NET		49° 40.21	124° 16.30	352		-			☐ ☐	Down 1/2 mS
			23:04	BO			° 40.21	° 16.31		50	-			☐ ☐	
			23:05	EN			° 40.21	° 16.31			-			☐ ☐	
88	N22	6	23:14	BE	NET		49° 40.22	124° 16.31	352		-			☐ ☐	straight up & dn
			23:26	BO			° 40.22	° 16.30		347	-			☐ ☐	
			23:32	EN			° 40.23	° 16.31			-			☐ ☐	DonE
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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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EN = End Time of Cast

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

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