

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2018-091

DATE:

From: Oct 10th 2018

To: Oct 16th 2018

VESSEL:

VECTOR

PROJECT(S):

MEQ

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: Notebook #10

Data acquisition program: Seaterm

CTD deck unit make: N/A model: _____ serial number: _____

Primary CTD

Make: SBE model: 25 serial number: 456

Primary temperature serial number: 5130

Primary conductivity serial number: 3500

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model ECO Cable gain: 13 s/n: 4185 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 1592 P S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: Pressure SBE 29 s/n: 0668 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)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>October</u>				Year <u>2013</u>			Vessel <u>Vesley</u>			Cruise ID <u>2013-091</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							
1	SWIFTSURE	11	14:22	BE	MOR		48°30.870	124°56.270	70		-			☐ ☐	Mooring Recovered
2	SWIFTSURE	11	15:39	BE	MOR		48°30.916	124°56.180	72.5		-			☐ ☐	Mooring Recovered
3	SWIFTSURE	11	15:52	BE	CTD		48°30.926	124°56.190	72		-		SR	☒ ☐	CTD 1
			15:55	BO			°30.940	°56.210		60	-			☐ ☐	
			15:57	EN			°30.977	°56.344			-			☐ ☐	
4	CTD 2	11	18:08	BE	CTD		48°31.710	124°39.711	171		-		CO + BW	☒ ☐	CTD 2
			18:10	BO			48°31.751	124°39.801		163	-			☐ ☐	
			18:13	EN			48°31.772	124°39.850			-			☐ ☐	
5	PORT RENFREW	11	21:00	BE	MOR		48°30.293	124°30.971	166		-			☐ ☐	MOORING RECOVERED
6	PORT RENFREW	11	:	BE	MOR		48°30.278	124°31.018	167.5		-			☐ ☐	
7	CTD 3	11	22:02	BE	CTD		48°30.277	124°31.008	167		-		CO + BW	☒ ☐	CTD 3
			22:05	BO			48°30.273	124°30.981		155	-			☐ ☐	
			22:07	EN			48°30.267	124°30.950			-			☐ ☐	
8	CTD 4	11	23:07	BE	CTD		48°32.255	124°37.779	125		-		CO + BW	☒ ☐	CTD 4
			23:09	BO			48°32.255	124°37.752		110	-			☐ ☐	
			23:13	EN			48°32.254	124°37.701			-			☐ ☐	CTD onboard
9	CTD 5	12	01:04	BE	CTD		48°36.296	124°52.779	60		-		CO + BW	☒ ☐	
			01:05	BO			48°36.297	124°52.799		50	-			☐ ☐	
			01:06	EN			48°36.300	124°52.825			-			☐ ☐	

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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Month <u>October</u>			Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-091</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
10	CTD 6	12	03:07	BE	CTD		48°40.645	125° 9.192	62		-		SK	☒	
			03:08	BO			°40.649	° 9.217		52	-			☐	
			03:09	EN			°40.652	° 9.223			-			☐	
11	CTD 7	12	05:04	BE	CTD		48°45.459	125°21.816	97		-		SR	☒	Pause @ 42m
			05:07	BO			°45.447	°21.872		90	-			☐	for ship maneuvers
			05:09	EN			°45.449	°21.884			-			☐	
12	CTD 8	12	07:05	BE	CTD		48°52.375	125°36.668	48		-		SR	☒	
			07:06	BO			°52.382	°36.673			-			☐	
			07:07	EN			°52.383	°36.672			-			☐	
13	CTD 10	12	09:08	BE	CTD		48°44.726	125°22.277	102		-		SR	☒	CTD 9 aborted
			09:10	BO			°44.723	°22.300		95	-			☐	for ship re-positioning
			09:12	EN			°44.724	°22.307			-			☐	
14	CTD 11	12	11:04	BE	CTD		48°39.118	125° 5.407	67		-		SR	☒	
			11:06	BO			°39.118	° 5.397		60	-			☐	
			11:07	EN			°39.120	° 5.392			-			☐	
15	CTD 12	12	12:59	BE	CTD		48°34.232	124°47.466	89		-			☐	Started @ 2:40m
			13:03	BO			°34.207	°47.444		82	-			☐	after switch
			13:04	EN			°34.202	°47.435			-			☐	was turned on.
			:				°	°			-			☐	

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Month <u>October</u>				Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-091</u>					Page <u>5</u> of <u> </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	
16	CTD13	12	15:06	BE	CTD		48° 29.067	124° 27.606	170		-		CO+JW	☐ ☒		
			15:08	BO			° 29.051	° 27.603		162	-			☐ ☐		
			15:11	EN			° 29.031	° 27.572			-			☐ ☐		
17	Gordon Rie	12	17:15		MOR		48° 23.808	124° 08.069	118		-			☐ ☐	mooring recovery	
18	Gordon Rie	12	18:02		MOR		48° 23.808	124° 08.069			-			☐ ☐	mooring deployed	
19	CTD14	12	18:08	BE	CTD		48° 23.811	124° 08.052	118		-		CO+JW	☐ ☒		
			18:10	BO			° 23.820	° 08.020		110	-			☐ ☐		
			18:12	EN			° 23.830	° 08.109			-			☐ ☐		
20	Snake	12	20:43		MOR		48° 17.417	124° 39.131	168		-			☐ ☐	mooring recovery	
21	Snake	12	21:59		MOR		48° 17.377	124° 39.301	167		-			☐ ☐	mooring deployed	
22	CTD15	12	22:11	BE	CTD		48° 17.361	124° 39.181	165		-		CO+JW	☐ ☒		
			22:14	BO			° 17.345	° 39.142		157	-			☐ ☐		
			22:17	EN			° 17.318	° 39.100			-			☐ ☐		
23	CTD16	12	23:12	BE	CTD		48° 18.129	124° 43.256	169		-		CO+JW	☐ ☒		
			23:14	BO			° 18.150	° 43.216		161	-			☐ ☐		
			23:18	EN			° 18.171	° 43.166			-			☐ ☐		
24	CTD17	13	01:05	BE	CTD		48° 17.095	124° 39.356	182		-		CO+JW	☐ ☒		
			01:08	BO			° 17.126	° 39.323		174	-			☐ ☐		
			01:11	EN			° 17.145	° 39.255			-			☐ ☐		
Event Type: <u>LOOP</u> = Sea Water Loop Firing Method: <u>Time</u> = Time Code																

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 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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Month <u>October</u>			Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-091</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
25	CTD18	13	03:03	BE	CTD	/	48° 17.225	123° 35.757	179		-		SR	☒	
			03:08	BO			° 17.208	° 35.754		172	-			☐	
			03:11	EN			° 17.201	° 35.745			-			☐	
26	CTD19	13	05:03	BE	CTD	/	48° 17.753	123° 39.375	147		-		SR	☒	Cast started
			05:08	BO			° 17.777	° 39.533		140	-			☐	2:25 mins after
			05:11	EN			° 17.792	° 39.653			-			☐	switch flip
27	CTD20	13	06:59	BE	CTD	/	48° 17.147	123° 34.918	170		-		SR	☒	
			07:03	BO			° 17.134	° 35.045		163	-			☐	
			07:06	EN			° 17.138	° 35.155			-			☐	
28	CTD21	13	09:02	BE	CTD	/	48° 17.228	123° 37.061	190		-		SR	☒	
			09:07	BO			° 17.291	° 37.144		182	-			☐	
			09:10	EN			° 17.314	° 37.133			-			☐	
29	CTD23	13	11:06	BE	CTD	/	48° 17.219	123° 38.481	183		-		SR	☒	
			11:11	BO			° 17.254	° 38.436		175	-			☐	
			11:14	EN			° 17.237	° 38.322			-			☐	
30	CTD25	13	12:59	BE	CTD	/	48° 17.433	123° 43.868	175		-		SR	☒	
			13:04	BO			° 17.449	° 43.737		168	-			☐	
			13:06	EN			° 17.451	° 43.656			-			☐	
31	CTD26	13	15:05	BE	CTD	/	48° 17.349	123° 39.151	164		-		CO-BW	☒	

Event Type:

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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

DE = Deployment Time
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Month <u>October</u>			Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-091</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
31	CTD26	13	15:07	BO	CTD	/	48°17.368	123°39.096		156	-		CO+SW	☒	
			15:10	EN			°17.391	°39.007			-			☐	CTD onboard
32	CTD27	13	17:11	BE	CTD	/	48°17.491	123°38.713	163		-		CO+SW	☒	
			17:14	BO			°17.505	°38.746		155	-			☐	
			17:16	EN			°17.502	°38.750			-			☐	CTD @ surface
33	CTD28	13	19:03	BE	CTD	/	48°18.080	123°42.407	166		-		CO+SW	☒	
			19:06	BO			°18.130	°42.505		158	-			☐	CTD @ 139m for ~2 mins
			19:11	EN			°18.199	°42.640			-			☐	19:06 ship re-position 19:08 resume ascent
34	CTD29	13	21:03	BE	CTD	/	48°17.495	123°38.972	161		-		CO+SW	☒	
			21:06	BO			°17.526	°39.021		153	-			☐	
			21:09	EN			°17.551	°39.066			-			☐	CTD @ surface
35	CTD30	13	23:01	BE	CTD	/	48°16.944	123°36.298	181		-		CO+SW	☒	
			23:05	BO			°16.922	°36.264		175	-			☐	
			23:08	EN			°16.882	°36.230			-			☐	
36	CTD31	14	01:03	BE	CTD	/	48°16.648	123°34.650	165		-		CO+SW	☒	Dall's for pises circling vessel
			01:06	BO			°16.596	°34.590		155	-			☐	
			01:09	EN			°16.589	°34.534			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

Event Type:

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DRF = Drifter

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Bottle Firing Method:

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

Notes:

Time Code:

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

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Month			Year			Vessel			Cruise ID					Page		of	
October			2018			Vector			2018-091					6		1	
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									
37	CTD32	14	03:06	BE	CTD		48°16.322	123°35.948	177		-		SR	☐	☒		
			03:09	BO			°16.299	°35.919		170	-			☐	☐		
			03:12	EN			°16.275	°35.889			-			☐	☐		
38	CTD33	14	05:02	BE	CTD		48°17.506	123°41.301	175		-		SR	☐	☒		
			05:05	BO			°17.513	°41.396		168	-			☐	☐		
			05:08	EN			°17.519	°41.459			-			☐	☐		
39	CTD34	14	07:04	BE	CTD		48°17.728	123°40.431	167		-		SR	☐	☒		
			07:06	BO			°17.766	°40.507			-			☐	☐		
			07:09	EN			°17.822	°40.656			-			☐	☐		
40	CTD35	14	09:05	BE	CTD		48°17.777	123°38.718	143		-		SR	☐	☒		
			09:07	BO			°17.825	°38.814		136	-			☐	☐		
			09:09	EN			°17.856	°38.843			-			☐	☐		
41	CTD36	14	11:03	BE	CTD		48°17.666	123°41.209	172		-		SR	☐	☒		
			11:06	BO			°17.714	°41.222		165	-			☐	☐		
			11:08	EN			°17.720	°41.169			-			☐	☐		
42	CTD37	14	13:12	BE	CTD		48°17.778	123°43.646	172		-		SR	☐	☒	Cast delay to	
			13:14	BO			°17.807	°43.624		164	-			☐	☐	remanover the	
			13:17	EN			°17.825	°43.609			-			☐	☐	ship. Started	
			:				°	°			-			☐	☐	at 6:20 afterswitch	
Event Type: LOOP = Sea Water Loop Firing Method: Time Code:																	

Event Type:

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Bottle Firing Method:

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Notes:

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Month				Year				Vessel				Cruise ID			
October				2018				Vector				2018-091			
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	Haro Strait	14	16:23		MOR	/	48°29.770	123°11.966	210		-			☐ ☐	mooring recovery
44	Haro Strait	14	17:20		MOR	/	48°29.752	123°11.598	228		-			☐ ☐	mooring deployment
45	CTD38	14	17:28	BE	CTD	/	48°29.790	123°11.770	224		-		(CO+SW)	☐ ☒	
			17:30	BO			°29.757	°11.832		215	-			☐ ☐	
			17:33	EN			°29.757	°11.976			-			☐ ☐	
46	Bandary P.	14	20:50		MOR	/	48°43.912	123°09.051	184		-			☐ ☐	mooring recovery
47	Bandary P.	14	21:39		MOR	/	48°44.020	123°09.050	178		-			☐ ☐	mooring deployment
48	CTD39	14	21:49	BE	CTD	/	48°44.073	123°09.262	185		-		(CO+SW)	☐ ☒	
			21:52	BO			°44.082	°09.368		175	-			☐ ☐	
			21:55	EN			°44.104	°09.487			-			☐ ☐	
49	CTD40	14	23:07	BE	CTD	/	48°46.304	123°04.741	172		-		(CO+SW)	☐ ☒	
			23:09	BO			°46.296	°04.716		155	-			☐ ☐	
			23:12	EN			°46.284	°04.689			-			☐ ☐	
50	CTD41	15	00:01	BE	CTD	/	48°43.677	123°12.712	215		-		(CO+SW)	☐ ☒	
			00:05	BO			°43.682	°12.786		200	-			☐ ☐	
			00:08	EN			°43.689	°12.820			-			☐ ☐	
51	CTD42	15	01:06	BE	CTD	/	48°38.280	123°15.136	201		-		(CO+SW)	☐ ☒	
			01:09	BO			°38.319	°15.136		190	-			☐ ☐	Dall's porpoises around vessel
			01:12	EN			°38.353	°15.123			-			☐ ☐	

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Bottle Firing Method:

US = Up / Stop (default)
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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
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Month <u>October</u>				Year <u>2018</u>		Vessel <u>Vector</u>			Cruise ID <u>2018-09</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							
52	CTD 43	15	03:03	BE	CTD		48°27.748	123°10.420	122		-		SR	☒	
			03:05	BO			°27.737	°10.439		110	-			☐	
			03:06	EN			°27.722	°10.461			-			☐	
53	CTD 44	15	05:08	BE	CTD		48°30.090	123°12.092	199		-		SR	☐	Start @ 2:15
			05:16	BO			°29.910	°12.087		193	-			☐	after switch
			05:19	EN			°29.872	°12.083			-			☐	on. →
54	CTD 45	15	07:04	BE	CTD		48°33.023	123°11.542	149		-		SR	☐	
			07:06	BO			°32.943	°11.554		142	-			☐	
			07:08	EN			°32.864	°11.558			-			☐	
55	CTD 46	15	09:05	BE	CTD		48°30.855	123°11.582	245		-		SR	☐	
			09:09	BO			°30.734	°11.534		237	-			☐	
			09:13	EN			°30.625	°11.528			-			☐	
56	CTD 47	15	11:05	BE	CTD		48°30.705	123°10.790	253		-		SR	☐	Data upload
			11:08	BO			°30.602	°10.711		245	-			☐	done
			11:12	EN			°30.568	°10.714			-			☐	
57	CTD 48	15	13:10	BE	CTD		48°43.954	123°07.885	152		-		SR	☐	
			13:12	BO			°43.957	°07.872		144	-			☐	
			13:15	EN			°43.959	°07.856			-			☐	
			:				°	°			-			☐	

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:

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DN = Down / No stop

Notes:

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The ship stopped the winch @ 141m to reposition the ship started again @ 05:15 UTC

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Month <u>October</u>			Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-091</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
58	CTD19	15	15:06	BE	CTD	✓	48°57.293	123°08.893	109		-		(0+SW)	☐ ☒	
			15:07	BO			°57.316	°08.900		100	-			☐ ☐	
			15:09	FN			°57.331	°08.922			-			☐ ☐	
59	Georgia Strait	15	16:58	BO		✓	49°07.460	123°27.347	305		-			☐ ☐	Box core
60	CTD50	15	17:39	BE	CTD	✓	49°07.435	123°26.772	291		-		(0+SW)	☐ ☐	
			17:44	BO			°07.433	°26.684		280	-			☐ ☐	
			17:48	FN			°07.403	°26.648			-			☐ ☐	
61	CTD51	15	19:05	BE	CTD	✓	49°00.974	123°19.754	204		-		(0+SW)	☐ ☒	
			19:08	BO			°00.973	°19.779		195	-			☐ ☐	
			19:12	FN			°00.962	°19.807			-			☐ ☐	
62	CTD52	15	21:21	BE	CTD	✓	48°46.440	123°03.735	138		-		(0+SW)	☐ ☒	
			21:24	BO			°46.458	°03.766		120	-			☐ ☐	
			21:27	FN			°46.438	°03.798			-			☐ ☐	
63	CTD53	15	23:03	BE	CTD	✓	48°36.269	123°14.382	223		-		(0+SW)	☐ ☒	
			23:06	BO			°36.204	°14.403		215	-			☐ ☐	
			23:10	FN			°36.180	°14.418			-			☐ ☐	
64	CTD54	16	01:06	BE	CTD	✓	48°33.009	123°11.744	251		-		(0+SW)	☐ ☒	
			01:10	BO			°32.955	°11.759		241	-			☐ ☐	
			01:14	FN			°32.940	°11.769			-			☐ ☐	

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Month <u>October</u>				Year <u>2018</u>		Vessel <u>Vector</u>		Cruise ID <u>2018-091</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							
65	CTD55	16	03:03	BE	CTD		48°31.861	123°12.734	58		-		SR	☐	☒
			03:04	BO			°31.846	°12.725		50	-			☐	☐
			03:05	EN			°31.844	°12.723			-			☐	☐
66	CTD56	16	05:02	BE	CTD		48°33.278	123°11.310	245		-		SR	☐	☒
			05:06	BO			°33.273	°11.315		237	-			☐	☐
			05:09	EN			°33.270	°11.319			-			☐	☐
67	CTD57	16	07:06	BE	CTD		48°31.410	123°11.365	242		-		SR	☐	☒
			07:10	BO			°31.312	°11.348		237	-			☐	☐
			07:14	EN			°31.229	°11.338			-			☐	☐
68	CTD58	16	09:06	BE	CTD		48°29.654	123°11.374	230		-		SR	☐	☒
			09:10	BO			°29.543	°11.357		223	-			☐	☐
			09:13	EN			°29.483	°11.337			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐
			:				°	°			-			☐	☐

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