

**** 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 laptop LAPTOP-FC9JJD1A

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11 serial number: 508

Primary CTD

Make: SBE model: 9 serial number: 4413

Primary temperature serial number: 4700

Primary conductivity serial number: 3531

Secondary temperature serial number: 4888

Secondary conductivity serial number: 4513

Transmissometer: Wetlabs Model: CSTAR serial: 983DR

Transmissometer: _____ Model: _____ serial: _____

Fluorometer: Model Seapoint Cable gain: 10X serial: 3950 P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ serial: _____ P, S or NO pump?

Oxygen sensor: SBE Model: 43 serial: 1600 P, S or NO pump?

PAR sensor: Biospherical Model: BSP 2300 serial: 4656 Surface PAR? Y/N

Other sensors: SPAR serial: 16504 P, S or NO pump?

Other sensors: SBE 16 pl serial: 0692 P, S or NO pump?

Other sensors: Valeport Vals00 altimeter serial: 76341 P, S or NO pump?

Other sensors: _____ serial: _____ 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: _____ serial: _____

Transmissometer: _____ Model: _____ serial: _____

Fluorometer: Model _____ Cable gain: _____ serial: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ serial: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ serial: _____ P, S or NO pump?

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

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ 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 (typical on small launches).

Rosette Setup:

Number of bottles: 24
Manufacturer: 105
Volume of bottles (litres): 10

Rosette/Niskin Bottle Serial Numbers:

1: _____	2: _____	3: _____	4: _____	5: _____
6: _____	7: _____	8: _____	9: _____	10: _____
11: _____	12: _____	13: _____	14: _____	15: _____
16: _____	17: _____	18: _____	19: _____	20: _____
21: _____	22: _____	23: _____	24: _____	

Make sure to note any bottle changes or repairs during your cruise in this log book.

Winches:

1. Make: <u>Swann</u>	Model: <u>324</u>	Serial #: <u>1483</u>	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):

Label Printers:

Primary Printer Kit #: _____
Secondary Printer Kit #: _____
Software Version: _____

Thermosalinograph System (SBE21/45):

Program: _____ Version: _____
Sampling interval (seconds): _____
TSG serial number: 3411
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: _____ after cast: _____

Pumps working?

Yes (0011) No (0010)

Secondary Temp – Primary Temp:

(Average from the mixed region) _____

Secondary Salinity – Primary Salinity:

(Average from the mixed region) _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month APRIL			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	SI	5	01:54	BE	ROS	US	48° 39.084	123° 30.556	185		1 - 9		SR	☒	
			01:57	BO			° 39.085	° 30.552			-			☐	
			02:13	EN			° 39.094	° 30.600			-			☐	
2	62	5	14:18	BE	ROS	US	48° 22.788	123° 2.605	151		10 - 20		SR	☒	
			14:21	BO			° 22.790	° 2.606			-			☐	
			14:37	EN			° 22.799	° 2.594			-			☐	
3	63	5	15:41	BE	NET		48° 14.611	122° 58.468	151		-		N ²	☐	
			15:47	BO			° 14.603	° 58.466		141	-			☐	
			15:51	EN			° 14.596	° 58.461			-			☐	
4	63	5	16:05	BE	ROS	US	48° 14.586	122° 58.458	154		21 - 24		SR	☒	
			16:08	BO			° 14.585	° 58.456			-			☐	
			16:15	EN			° 14.580	° 58.466			-			☐	
5	64	5	17:00	BE	ROS		48° 12.796	123° 5.794	112		-		SR	☒	
			17:02	BO			° 12.796	° 5.792		106	-			☐	
			17:04	EN			° 12.797	° 5.791			-			☐	
6	65	5	17:45	BE	ROS	US	48° 15.902	123° 9.844			25 - 34		SR	☒	
			17:48	BO			° 15.898	° 9.810			-			☐	
			18:00	EN			° 15.884	° 9.799			-			☐	
			:				°	°			-			☐	

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month <u>April</u>				Year <u>2021</u>		Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
<u>7</u>	<u>66</u>	<u>5</u>	<u>18:38</u>	<u>BE</u>	<u>ROS</u>		<u>48° 19.283</u>	<u>123° 14.191</u>	<u>103</u>		<u>-</u>		<u>SR</u>	☒	
			<u>18:40</u>	<u>BO</u>			<u>° 19.279</u>	<u>° 14.185</u>		<u>96</u>	<u>-</u>			☐	
			<u>18:42</u>	<u>EN</u>			<u>° 19.284</u>	<u>° 14.173</u>			<u>-</u>			☐	
<u>8</u>	<u>67</u>	<u>5</u>	<u>19:17</u>	<u>BE</u>	<u>ROS</u>		<u>48° 22.790</u>	<u>123° 18.050</u>	<u>108</u>		<u>-</u>		<u>CO</u>	☒	
			<u>19:19</u>	<u>BO</u>			<u>° 22.793</u>	<u>° 18.047</u>		<u>98</u>	<u>-</u>			☐	
			<u>19:21</u>	<u>EN</u>			<u>° 22.792</u>	<u>° 18.048</u>			<u>-</u>			☐	
<u>9</u>	<u>104</u>	<u>5</u>	<u>20:32</u>	<u>BE</u>	<u>ROS</u>		<u>48° 20.000</u>	<u>123° 18.060</u>	<u>85</u>		<u>-</u>		<u>SR</u>	☒	
			<u>20:33</u>	<u>BO</u>			<u>° 19.998</u>	<u>° 18.096</u>		<u>78</u>	<u>-</u>			☐	
			<u>20:35</u>	<u>EN</u>			<u>° 19.997</u>	<u>° 18.087</u>			<u>-</u>			☐	
<u>10</u>	<u>ADCP</u>	<u>5</u>	<u>21:20</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>48° 14.010</u>	<u>123° 18.041</u>	<u>122</u>		<u>35 - 44</u>	<u>10</u>	<u>SR</u>	☒	
			<u>21:23</u>	<u>BO</u>			<u>° 14.010</u>	<u>° 18.041</u>		<u>118</u>	<u>-</u>			☐	
			<u>21:35</u>	<u>EN</u>			<u>° 14.011</u>	<u>° 18.052</u>			<u>-</u>			☐	
<u>11</u>	<u>105</u>	<u>5</u>	<u>22:03</u>	<u>BE</u>	<u>ROS</u>		<u>48° 10.996</u>	<u>123° 19.028</u>	<u>86</u>		<u>-</u>		<u>SR</u>	☒	
			<u>22:04</u>	<u>BO</u>			<u>° 10.991</u>	<u>° 19.027</u>		<u>82</u>	<u>-</u>			☐	
			<u>22:06</u>	<u>EN</u>			<u>° 10.990</u>	<u>° 19.014</u>			<u>-</u>			☐	
<u>12</u>	<u>68</u>	<u>5</u>	<u>23:42</u>	<u>BE</u>	<u>ROS</u>		<u>48° 12.197</u>	<u>123° 43.014</u>	<u>140</u>		<u>-</u>		<u>SR</u>	☒	
			<u>23:46</u>	<u>BO</u>			<u>° 12.210</u>	<u>° 43.063</u>		<u>136</u>	<u>-</u>			☐	
			<u>23:48</u>	<u>EN</u>			<u>° 12.230</u>	<u>° 43.139</u>			<u>-</u>			☐	
			<u>:</u>				<u>°</u>	<u>°</u>			<u>-</u>			☐	

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

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
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Notes: _____

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>April</u>			Year <u>2021</u>			Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
13	69	6	00:38	BE	ROS		48° 15.550	123° 43.178	180		45-56	12	SR	☒	
			00:42	BO			° 15.562	° 43.174		175	-			☐	
			00:58	EN			° 15.584	° 43.141			-			☐	
14	70	6	01:31	BE	ROS		48° 19.208	123° 43.214	151		-		SR	☒	
			01:34	BO			° 19.212	° 43.206		146	-			☐	
			01:36	EN			° 19.204	° 43.193			-			☐	
15	ORCA 2	6	20:44	BE	ROS		48° 33.624	124° 49.360	100		-		SR	☒	
			20:46	BO			° 33.618	° 49.396		95	-			☐	
			20:48	EN			° 33.611	° 49.434			-			☐	
16	Swiftsure ISZ	6	14:42	RE	MOR		48° 33.121	125° 00.430			-		CO	☐	
17	Swiftsure ISZ	6	17:17	DE	MOR		48° 33.120	125° 00.436	41		-		CO	☐	
18	ORCA 2	6	19:33	RE	MOR		48° 33.747	124° 49.459			-		CO	☐	
19	ORCA 2	6	20:13	DE	MOR		48° 33.738	124° 49.381	91		-		CO	☐	
20	ORCA 1	6	21:49	RE	MOR		48° 34.245	124° 45.043			-		CO	☐	
21	ORCA 1	6	22:44	DE	MOR		48° 34.231	124° 45.076	97		-		CO	☐	
22	103	6	23:07	BE	ROS		48° 32.990	124° 42.965	121		-		SR	☒	
			23:10	BO			° 32.999	° 42.958			-			☐	
			23:12	EN			° 33.008	° 42.947			-			☐	
			:				°	°			-			☐	

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>April</u>				Year <u>2021</u>		Vessel <u>Vector</u>				Cruise ID <u>2021-020</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
23	102	6	23:40	BE	ROS	US	48°30.050	124°43.988	256		57-71	15	SR	☒	
			23:46	BO			°30.065	°43.939			-			☐	
			00:09	EN			°29.984	°43.829			-			☐	
24	101	7	00:56	BE	ROS		48°25.393	124°45.092	238		-		SR	☒	
			01:01	BO			°25.388	°45.074		232	-			☐	
			01:05	EN			°25.394	°45.078			-			☐	
25	74	7	01:57	BE	ROS		48°25.106	124°35.564	190		-		SR	☒	
			02:02	BO			°25.097	°35.540		186	-			☐	
			02:06	EN			°25.067	°35.531			-			☐	
26	75	7	02:39	BE	ROS	US	48°28.183	124°32.689	224		72-85	14	SR	☒	
			02:43	BO			°28.196	°32.594		219	-			☐	
			03:02	EN			°28.129	°32.396			-			☐	
27	76	7	03:46	BE	ROS		48°31.343	124°29.968	92		-		SR	☒	
			03:48	BO			°31.324	°29.977			-			☐	
			03:5	EN			°31.312	°29.984			-			☐	
28	ORCA 3	7	14:30	RE	MOR		48°30.800	124°49.778			-		CO	☐	
29	ORCA 3	7	16:21	DE	MOR		48°30.846	124°49.784	219		-		CO	☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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North 0.49 miles off the usual #72 site 0.499 DBC0003646078

DAILY SCIENCE LOG

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Month April				Year 2020 2021		Vessel Vector				Cruise ID 2021-020					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
30	71	7	20:19	BE	ROS		48°22.170	123°59.351	112		-		SR	☒	
			20:20	BO			°22.172	°59.348			-			☐	
			20:22	EN		*	°22.174	°59.356			-			☐	
31	72*	7	21:02	BE	NET		48°19.026	124°03.705	145		-		N2	☐	water pressure
			21:10	BO			°18.993	°03.650		175	-			☐	finally restored
			21:14	EN		*	°18.990	°03.614			-			☐	to sea water loop
32	72*	7	21:30	BE	ROS	US	48°18.960	124°3.617	188		86-99	14	SR	☒	-DICs / squirt
			21:33	BO			°19.009	°3.679			-			☐	w/new 200µl dispenser
			21:50	EN			°19.064	°3.905			-			☐	
33	61*	8	02:57	BE	ROS		48°29.400	123°11.465	228				SR	☒	west of usual
			03:02	BO			°29.395	°11.470		220	-			☐	site for 61
			03:07	EN			°29.380	°11.471			-			☐	
34	60*	8	03:52	BE	ROS		48°34.105	123°13.994	253		-			☐	west of the
			03:57	BO			°34.106	°13.990		250	-			☐	usual spot for
			04:01	EN			°34.102	°14.004			-			☐	# 60
35	59	8	14:19	BE	NET		48°37.708	123°15.289	186		-		N2	☐	1.5 Kt of current
			14:26	BO			°37.712	°15.285		176	-			☐	
			14:30	EN			°37.694	°15.273			-			☐	
			:				°	°			-			☐	

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DAILY SCIENCE LOG

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
36	59	8	14:45	BE	ROS	US	48° 37.784	123° 15.358	182		106-114	15	SR	☒ ☐	1.5 knot of current
			14:48	BO			° 37.771	° 15.359		178	-			☐ ☐	DIC error →
			15:06	EN			° 37.751	° 15.376			-			☐ ☐	
37	58	8	16:00	BE	ROS	/	48° 42.962	123° 14.326	337		/		SR	☒ ☐	
			16:06	BO			° 42.960	° 14.323		332	-			☐ ☐	
			16:12	EN			° 42.967	° 14.353			-			☐ ☐	
38	57	8	16:50	BE	ROS	/	48° 43.976	123° 8.149	164		/		SR	☒ ☐	
			16:53	BO			° 43.976	° 8.176		163	-			☐ ☐	
			16:56	EN			° 43.978	° 8.213			-			☐ ☐	
39	56	8	17:33	BE	ROS	US	48° 46.381	123° 01.613	218		115-128	14	SR	☒ ☐	
			17:37	BO			° 46.378	° 01.600		213	-			☐ ☐	
			17:51	EN			° 46.375	° 01.550			-			☐ ☐	
40	47	8	18:37	BE	ROS	/	48° 49.282	123° 6.112	187		-		SR	☒ ☐	
			18:40	BO			° 49.286	° 6.120		183	-			☐ ☐	
			18:44	EN			° 49.292	° 6.149			-			☐ ☐	
41	48	8	19:15	BE	ROS	/	48° 51.791	123° 03.518	206		-		CO	☒ ☐	
			19:19	BO			° 51.781	° 03.546		203	-			☐ ☐	
			19:24	EN			° 51.787	° 03.568			-			☐ ☐	
			:				°	°			-			☐ ☐	

The DIC on bottle 8 may have two pumps of H₂GCL₂ in it. SR

DAILY SCIENCE LOG

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
42	49	8	20:01	BE	ROS	/	48° 54.924	122° 59.647	136		-		CO	☒	
			20:04	BO			° 54.926	° 59.657		132	-			☐	
			20:07	EN			° 54.931	° 59.674			-			☐	
43	44	8	20:41	BE	ROS	/	48° 56.772	123° 5.921	122		-		SR	☒	
			20:44	BO			° 56.761	° 5.922		119	-			☐	
			20:46	EN			° 56.759	° 5.923			-			☐	
44	45	8	21:11	BE	ROS		48° 54.647	123° 7.763	125		-		SR	☒	
			21:13	BO			° 54.647	° 7.763		122	-			☐	
			21:15	EN			° 54.650	° 7.783			-			☐	
45	46	8	21:44	BE	NET		48° 51.395	123° 10.790	180		-		N ²	☐	
			21:51	BO			° 51.419	° 10.803			-			☐	
			21:54	EN			° 51.437	° 10.807			-			☐	
46	46	8	22:07	BE	ROS	US	48° 51.463	123° 10.814	177		129-140	12	SR	☒	Station name and
			22:12	BO			° 51.462	° 10.823			-			☐	event # are the
			22:25	EN			° 51.478	° 10.813			-			☐	same!!
47	109	8	23:28	BE	ROS	/	48° 56.497	123° 21.748	198		-		SR	☒	
			23:31	BO			° 56.500	° 21.703		193	-			☐	
			23:34	EN			° 56.528	° 21.702			-			☐	
			:				°	°			-			☐	

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>April</u>			Year <u>2020</u>			Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
48	43	9	00:33	BE	ROS		49° 0.199	123° 30.128	200		-		SR	☒	
			00:36	BO			° 0.182	° 30.138		195	-			☐	
			00:40	EN			° 0.185	° 30.137			-			☐	
49	42	9	01:05	BE	NET		49° 01.779	123° 26.252	323		-		N ²	☐	
			01:16	BO			° 01.801	° 26.351			-			☐	
			01:22	EN			° 01.795	° 26.408			-			☐	
50	42	9	01:35	BE	ROS	US	49° 1.816	123° 26.453	325		141-157		SR	☒	
			01:41	BO			° 1.820	° 26.438			-			☐	
			02:06	EN			° 1.820	° 26.420			-			☐	
51	41	9	02:37	BE	ROS		49° 3.262	123° 22.142	234		-		SR	☒	
			02:42	BO			° 3.252	° 22.129		231	-			☐	
			02:45	EN			° 3.257	° 22.117			-			☐	
52	VAN 7	9	14:22	BE	ROS	US	49° 17.423	122° 54.312	21		158-162		SR	☒	Went down at
			14:23	BO			° 17.424	° 54.312		18	-			☐	half speed
			14:28	EN			° 17.428	° 54.308			-			☐	
53	IND 1	9	15:14	BE	ROS		49° 19.842	122° 54.215	74		-		SR	☒	
			15:16	BO			° 19.846	° 54.214		71	-			☐	
			15:17	EN			° 19.848	° 54.215			-			☐	
			:				°	°			-			☐	

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)
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Produced by the Water Properties Group, IOS

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month April			Year 2020			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
54	IND2	9	15:37	BE	ROS	US	49°20.994	122°54.119	163		162-173	12	SR	☒	
			15:41	BO			°20.996	°54.122			-			☐	
			15:53	EN			°21.004	°54.106			-			☐	
55	IND5	9	16:41	BE	ROS	/	49°24.704	122°52.357	208		-		SR	☒	
			16:45	BO			°24.710	°52.361		205	-			☐	
			16:48	EN			°24.716	°52.361			-			☐	
56	IND8	9	17:16	BE	ROS	US	49°26.466	122°52.560	40.2		174-180		SR	☒	
			17:18	BO			°26.466	°52.555		37	-			☐	
			17:24	EN			°26.455	°52.547			-			☐	
57	IND6	9	17:54	BE	ROS	/	49°26.399	122°51.571	104		/	/	SR	☒	
			17:56	BO			°26.400	°51.570		100	-			☐	
			17:58	EN			°26.400	°51.569			-			☐	
58	IND7	9	18:22	BE	ROS	US	49°27.410	122°52.676	76		181-189	9	SR	☒	
			18:24	BO			°27.408	°52.676		73	-			☐	
			18:32	EN			°27.408	°52.681			-			☐	
59	IND4	9	19:13	BE	NET		49°23.306	122°52.512	223		/	/	NN/KS	☐	SCOR
			19:20	BO			49°23.287	122°52.503		213	-			☐	
			19:24	EN			49°23.275	122°52.501			-			☐	
			:				°	°			-			☐	

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DAILY SCIENCE LOG

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
60	IND 4	9	19:40	BE	ROS	US	49° 23.306	122° 52.498	223		190-204	15	SR	☒	
			19:45	BO			° 23.293	° 52.498		218	-			☐	
			20:00	EN			° 23.276	° 52.501			-			☐	
61	IND 3	9	20:48	BE	ROS	/	49° 22.216	122° 52.869	199		/	/	SR	☒	Bottles were
			20:52	BO			° 22.216	° 52.866		195	-			☐	out of the water
			20:55	EN			° 22.207	° 52.856			-			☐	at start
62	IND 1	9	21:25	BE	ROS	/	49° 19.831	122° 54.205	73		/	/	SR	☒	
			21:27	BO			° 19.829	° 54.202		70	-			☐	
			21:28	EN			° 19.826	° 54.198			-			☐	
63	IND 0	9	22:05	BE	ROS	US	49° 18.182	122° 56.521	34		205-210	6	SR	☐	1 rate moved south bk tanker anchored.
			22:06	BO			° 18.180	° 56.522			-			☐	
			22:10	EN			° 18.173	° 56.518			-			☐	
64	VAN 6	9	22:39	BE	NET		49° 17.894	122° 58.864	68		-		N ²	☐	
			22:41	BO			° 17.891	° 58.878		58	-			☐	
			22:43	EN			° 17.887	° 58.889			-			☐	
65	VAN 6		22:56	BE	ROS		49° 17.899	122° 58.888	70		211-219	9	SR	☒	
			22:58	BO			° 17.902	° 58.898		67	-			☐	
			23:06	EN			° 17.899	° 58.957			-			☐	
			:				°	°			-			☐	

DAILY SCIENCE LOG

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Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
66	VAN 5	10	00:52	BE	ROS	US	49° 17.705	123° 03.278	38		220-226	7	SR	☒	New SPAR Valves
			00:53	BO			° 17.704	° 03.270		35	-			☐	added to com file
			00:59	EN			° 17.707	° 03.274			-			☐	Bottle out of the
67	VAN 4	10	01:31	BE	ROS	US	49° 17.888	123° 05.759	61		227-235	9	SR	☒	Water for the cast
			01:33	EN			° 17.896	° 05.771		59	-			☐	Start.
			01:41				° 17.888	° 05.810			-			☐	
68	VAN 3	10	14:08	BE	ROS		49° 18.919	123° 09.928	42		-		CO	☒	
			14:09	BO			° 18.920	° 09.928		38	-			☐	
			14:11	EN			° 18.922	° 09.929			-			☐	
69	VAN 2	10	14:35	BE	ROS		49° 19.483	123° 13.692	68		-		CO	☒	
			14:37	BO			° 19.487	° 13.698		58	-			☐	
			14:38	EN			° 19.488	° 13.693			-			☐	
70	VAN 0	10	15:01	BE	ROS		49° 17.802	123° 13.691	48		-		CO	☒	0.06hmi SE of actual spot
			15:02	BO			° 17.798	° 13.694		39	-			☐	the ship
			15:03	EN			° 17.798	° 13.710			-			☐	
71	VAN 1	10	15:24	BE	NET		49° 18.863	123° 15.888	117		-		KS	☐	
			15:29	BO			° 18.865	° 15.982		110	-			☐	
			15:31	EN			° 18.858	° 15.984			-			☐	
			:				°	°			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
72	VAN 1	10	15:46	BE	ROS	US	49° 18.859	123° 15.942	117		236-246	11	SR	☒	
			15:48	BO			° 18.846	° 15.950		113	-			☐	
			15:59	EN			° 18.848	° 15.990			-			☐	
73	24	10	19:43	BE	ROS	US	49° 30.271	124° 06.020	427		247-250	4	SR	☒	Fired bot 5 by
			19:52	BO			° 30.313	° 06.026		424	-			☐	accident.
			20:04	EN			° 30.336	° 06.041			-			☐	
74	24	10	20:12	BE	NET		49° 30.385	124° 06.064	427		-		N ²	☐	
			20:30	BO			° 30.514	° 06.276		417	-			☐	1330 Local
			20:37	EN			° 30.554	° 06.376			-			☐	
75	22	10	21:54	BE	NET		49° 40.199	124° 16.318	355		-		N ²	☐	
			22:06	BO			° 40.206	° 16.323		345	-			☐	
			22:12	EN			° 40.225	° 16.321			-			☐	
76	22	10	22:26	BE	ROS		49° 40.247	124° 16.298	356		251-254		SR	☒	
			22:32	BO			° 40.249	° 16.296			-			☐	
			22:41	EN			° 40.219	° 16.277			-			☐	
77	JI 1	10	23:11	BE	ROS		49° 43.433	124° 15.490	241		255-262	8	SR	☒	
			23:15	BO			° 43.447	° 15.494		239	-			☐	
			23:26	EN			° 43.432	° 15.577			-			☐	
			:				°	°			-			☐	

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Month <u>April</u>			Year <u>2021</u>			Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
78	J13	11	00:39	BE	ROS	US	49°45.905	124° 9.974	310		263-270	8	SR	☒	
			00:46	BO			° 45.900	° 10.009		305	-			☐	
			00:59	EN			° 45.916	° 10.014			-			☐	
79	J15	11	01:45	BE	ROS	US	49°47.820	124° 02.046	668		271-278	8	SR	☒	
			01:57	BO			° 47.819	° 02.060		665	-			☐	
			02:14	EN			° 47.819	° 02.062			-			☐	
80	J16	11	02:43	BE	ROS	US	49°47.388	124° 57.248	365		279-286	8	SR	☒	
			02:50	BO			° 47.390	° 57.274		360	-			☐	
			03:02	EN			° 47.378	° 57.260			-			☐	
81	J17	11	14:10	BE	ROS	US	49°50.656	124° 53.822	682		287-294	8	SR	☒	
			14:22	BO			° 50.663	° 53.815			-			☐	
			14:41	EN			° 50.675	° 53.813			-			☐	
82	J14	11	15:42	BE	ROS	US	49°47.203	124° 5.758	604		295-302	8	SR	☒	
82	J14	11	15:55	BO			° 47.209	° 5.714		599	-			☐	
			16:11	EN			° 47.215	° 5.683			-			☐	
83	J12	11	16:53	BE	ROS	US	49°45.798	124° 14.414	327		303-310	8	SR	☒	
			16:59	BO			° 45.788	° 14.419		324	-			☐	
			17:11	EN			° 45.790	° 14.424			-			☐	
			:				°	°			-			☐	

DAILY SCIENCE LOG

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Month <u>April</u>			Year <u>2021</u>			Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
84	J12	11	17:18	BE	NET	/	49° 45.800	124° 14.419	330		-		N ²	☐	
			17:28	BO			° 45.811	° 14.417		320	-			☐	
			17:34	EN			° 45.808	° 14.415			-			☐	
85	22	11	19:09	BE	ROS	/	49° 47.239	124° 32.306	306		/	/	SR	☒	
			19:14	BO			° 47.236	° 32.336		306	-			☐	
			19:19	EN			° 47.222	° 32.335			-			☐	
86	15	11	21:23	BE	ROS	/	49° 51.608	125° 01.638	125		-		SR	☒	
			21:26	BO			° 51.605	° 01.633		120	-			☐	
			21:28	EN			° 51.605	° 01.626			-			☐	
87	14	11	21:45	BE	NET	/	49° 52.961	124° 59.589	316		/	/	N ²	☐	
			21:56	BO			° 52.976	° 59.567		303	-			☐	
			22:01	EN			° 52.984	° 59.560			-			☐	
88	14	11	22:14	BE	ROS	US	49° 52.990	124° 59.581	316		311-326	16	SR	☒	
			22:19	BO			° 52.990	° 59.598		312	-			☐	
			22:39	EN			° 52.986	° 59.616			-			☐	
89	13	11	23:20	BE	ROS	/	49° 55.314	124° 55.214	239		/	/	SR	☐	3X cable installed
			23:25	BO			° 55.308	° 55.229		233	-			☐	for this cast.
			:	EN			° 55.	° 55.			-			☐	
			:				° .	° .			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
90	18	12	00:02	RAE	ROS	/	49° 59.260	124° 58.939	146		/	/	SR	☒	
			00:05	BO			° 59.263	° 58.936		139	-			☐	
			00:07	EN			° 59.262	° 58.931			-			☐	
91	17	12	00:48	BE	ROS	/	49° 58.829	125° 4.373	268		/	/	SR	☒	
			00:53	BO			° 58.814	° 4.358		264	-			☐	
			00:57	EN			° 58.805	° 4.331			-			☐	
92	16	12	01:26	BE	ROS	US	49° 57.673	125° 08.777	159		327-337		SR	☒	
			01:30	BO			° 57.670	° 08.773		155	-			☐	
			01:43	EN			° 57.678	° 08.797			-			☐	
93	10	12	14:07	BE	ROS	/	49° 40.715	124° 47.297	102		-		CO	☒	
			14:09	BO			° 40.709	° 47.312		95	-			☐	
			14:12	EN			° 40.711	° 47.330			-			☐	
94	11	12	14:40	BE	ROS	/	49° 42.355	124° 43.370	303		-		CO	☒	spikes in data. >200m
			14:46	BO			° 42.374	° 43.379		298	-			☐	
			14:51	EN			° 42.364	° 43.397			-			☐	
95	12	12	15:15	BE	NET	/	49° 43.586	124° 40.809	358		-		N ²	☐	ABORTED - ship kink issues
95	12	12	15:23	BE	NET	/	49° 43.613	124° 40.837	359		-		N ²	☐	
			15:24	BO			° 43.619	° 40.855		347	-			☐	
			15:40	EN			° 43.632	° 40.862			-			☐	

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Month April				Year 2021			Vessel Vector				Cruise ID 2021-020				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
96	12	12	15:53	BE	ROS	US	49° 43.591	124° 40.819	359		338-354		SR	☒ ☐	Trns not clean
			16:00	BO			° 43.616	° 40.837		353	-			☐ ☐	
			16:28	EN			° 43.625	° 40.855			-			☐ ☐	
97	8	12	17:26	BE	ROS	/	49° 39.304	124° 33.007	340		/		SR	☒ ☐	
			17:32	BO			° 39.310	° 33.002		334	-			☐ ☐	
			17:38	EN			° 39.311	° 33.018			-			☐ ☐	
98	9	12	18:18	BE	ROS	US	49° 35.533	124° 38.238	170		355-366	12	SR	☐ ☐	PAR was out of
			18:21	BO			° 35.532	° 38.242		165	-			☐ ☐	the water when
			18:35	EN			° 35.537	° 38.239			-			☐ ☒	archiving started.
99	7	12	19:39	BE	ROS	/	49° 34.379	124° 24.209	351		-		SR	☒ ☐	
			19:45	BO			° 34.390	° 24.241		346	-			☐ ☐	
			19:51	EN			° 34.390	° 24.263			-			☐ ☐	
100	6	12	20:25	BE	ROS	US	49° 30.602	124° 27.785	198		367-379		SR	☒ ☐	
			20:28	BO			° 30.604	° 27.788		188	-			☐ ☐	
			20:45	EN			° 30.609	° 27.790			-			☐ ☐	
101	CPF2	12	21:11	BE	NET	/	49° 27.987	124° 29.997	328		-		N ²	☐ ☐	
			21:22	BO			° 27.995	° 30.017		318	-			☐ ☐	
			21:28	EN			° 28.000	° 30.012			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Ocean Sciences Division, Institute of Ocean Sciences

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
102	CPF2	12	21:40	BE	ROS	/	49° 28.003	124° 29.998	329		-		CO	☒	
			21:46	BO			° 28.008	° 30.005		324	-			☐	
			21:51	EN			° 28.010	° 30.002			-			☐	
103	3	12	22:46	BE	ROS	US	49° 26.598	124° 20.209	326		380-395	16	SR	☒	
			22:52	BO			° 26.600	° 20.248		321	-			☐	
			23:10	EN			° 26.634	° 20.202			-			☐	
104	4	12	23:46	BE	ROS	/	49° 24.512	124° 22.087	350		/	/	SR	☒	
			23:52	BO			° 24.520	° 22.078		342	-			☐	
			23:57	EN			° 24.524	° 22.068			-			☐	
105	1	13	00:52	BE	ROS	/	49° 20.305	124° 12.166	248		-		SR	☒	
			00:57	BO			° 20.294	° 12.174		243	-			☐	
			01:01	EN			° 20.298	° 12.160			-			☐	
106	2	13	01:31	BE	ROS	US	49° 24.090	124° 9.368	280		396-410		SR	☒	
			01:36	BO			° 24.092	° 9.364		277	-			☐	
			01:55	EN			° 24.076	° 9.311			-			☒	
107	25	13	02:24	BE	ROS	/	49° 27.750	124° 7.580	281		/	/	SR	☒	
			02:29	BO			° 27.762	° 7.571		284	-			☐	
			02:34	EN			° 27.763	° 7.560			-			☐	
			:				°	°			-			☐	

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

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

Notes: _____

Produced by the Water Properties Group, IOS

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Version: 17 Feb 2020

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Month <u>April</u>			Year <u>2021</u>			Vessel <u>Vector</u>			Cruise ID <u>2021-020</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
108	CPF1	13	03:12	RAE	ROS		49° 21.984	124° 5.156	250		411-414	4	SR	☒	
			03:16	BO			° 21.978	° 5.143		244	-			☐	
			03:27	EN			° 21.979	° 5.113			-			☐	
109	CPF1	13	03:29	BE	NET		49° 21.970	124° 5.080	250		-			☐	
			03:37	BO			° 21.968	° 5.036		240	-		N ²	☐	
			03:42	EN			° 21.979	° 5.031			-			☐	
110	37	13	14:13	BE	ROS		49° 13.552	123° 20.734	218		-		SR	☒	
			14:16	BO			° 13.568	° 20.734		213	-			☐	
			14:20	EN			° 13.583	° 20.722			-			☐	
111	38	13	14:53	BE	ROS		49° 11.983	123° 26.396	311		-		SR	☒	
			14:58	BO			° 11.975	° 26.410		306	-			☐	
			15:03	EN			° 11.960	° 26.447			-			☐	
112	38	13	15:12	BE	NET		49° 11.981	123° 26.421	311		-		N ²	☐	
			15:21	BO			° 11.990	° 26.459		301	-			☐	
			15:26	EN			° 12.020	° 26.422			-			☐	
113	39	13	16:06	BE	ROS	US	49° 9.770	123° 32.954	379		415-431		SR	☒	
			16:13	BO			° 9.774	° 32.981		374	-			☐	
			16:36	EN			° 9.773	° 32.980			-			☐	
			:				°	°			-			☐	

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DRF = Drifter
=

Bottle Firing Method:
 US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Time Code:
 BE = Beginning Time of Cast
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Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month April			Year 2021			Vessel Vector			Cruise ID 2021-020						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
114	40	13	17:17	BE	ROS	/	49°08.588	123°36.805	153		/	/	SR	☒	
			17:20	BO			°08.586	°36.810		153	-			☐	
			17:23	EN			°08.587	°36.806			-			☐	
115	40	13	17:29	BE	NET	/	49°08.621	123°36.840	139		/	/	N ²	☐	
			17:34	BO			°08.606	°36.825		139	-			☐	
			17:36	EN			°08.615	°36.841			-			☐	
116	GEO1	13	20:25	BE	NET		49°14.995	123°44.897	403		-		N ²	☐	
			20:39	BO			°14.997	°44.879		393	-			☐	
			20:46	EN			°15.003	°44.915			-			☐	
117	GEO1	13	21:02	BE	ROS	US	49°14.993	123°44.915	403		432-435		SR	☒	
			21:10	BO			°15.004	°44.922		398	-			☐	
			21:20	EN			°15.013	°44.945			-			☐	
118	26	13	21:52	BE	ROS	/	49°14.290	123°50.774	252		/	/	SR	☒	
			21:57	BO			°14.293	°50.795		244	-			☐	
			22:01	EN			°14.292	°50.778			-			☐	
119	265E	13	22:36	BE	ROS	/	49°16.321	123°47.948	410		/	/	SR	☒	East of 265
			22:43	BO			°16.327	°47.956		406	-			☐	For war games
			22:49	EN			°16.331	°47.982			-			☐	
			:				°	°			-			☐	

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Month April				Year 2021			Vessel Vector				Cruise ID 2021-020				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
120	27	13	23:19	BE	ROS	US	49° 19.014	123° 48.112	359		436-452	17	SR	☒	
			23:26	BO			° 19.056	° 48.122		355	-			☐	
			23:46	EN			° 19.072	° 48.972			-			☐	
121	275	14	00:39	BE	ROS	UN	49° 21.821	123° 46.650	122		/	/	NN/KS	☒	
			00:41	BO			° 21.826	° 46.622		117	-			☐	
			00:43	EN			° 21.847	° 46.602			-			☐	
122	28	14	01:06	BE	ROS	/	49° 24.077	123° 45.200	138		/	/	SR	☒	
			01:08	BO			° 24.068	° 45.160		134	-			☐	
			01:10	EN			° 24.067	° 45.119			-			☐	
123	28	14	01:16	BE	NET	/	49° 24.009	123° 45.155	138		/	/	N ²	☒	
			01:21	BO			° 24.063	° 45.195		135	-			☐	
			01:23	EN			° 24.084	° 45.200			-			☐	
124	SOG N	14	11:28	RE	MOR		49° 11.570	123° 20.801	195		-		CO	☐	
125	SOG N	14	15:44	DE	MOR		49° 11.572	123° 20.809	195		-		CO	☐	
126	SOG N	14	16:20	BE	ROS	/	49° 11.629	123° 20.807	195		/	/	SR	☒	
			16:24	BO			° 11.633	° 20.809		189	-			☐	
			16:27	EN			° 11.635	° 20.819			-			☐	
127	SOG S	14	18:25	RE	MOR		48° 58.748	123° 24.201	238		-		CO	☐	
128	SOG S	14	19:52	DE	MOR		48° 58.751	123° 24.203	233		-		CO	☐	

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Month April			Year			Vessel				Cruise ID					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
129	SOBS	14	20:02	BE	ROS	/	48° 58.842	123° 24.284	245		/	/	SR	☒	
			20:07	BO			° 58.831	° 24.283		238	-			☐	
			20:10	EN			° 58.843	° 24.311			-			☐	
130	GI01	14	22:00	BE	ROS	/	48° 45.797	123° 20.507	68		/	/	SR	☒	
			22:01	BO			° 45.797	° 20.506		65	-			☐	
			22:02	EN			° 45.799	° 20.508			-			☐	
131	GI01	14	22:07	BE	NET	/	48° 45.829	123° 20.534	68		/	/	N2	☐	
			22:09	BO			° 45.837	° 20.536		58	-			☐	
			22:10	EN			° 45.842	° 20.538			-			☐	
132	SC04	14	22:49	BE	NET	/	48° 43.510	123° 25.009	96		-		N2	☐	
			22:52	BO			° 43.512	° 25.016		86	-			☐	
			22:54	EN			° 43.511	° 25.020			-			☐	
133	SC04	14	23:04	BE	ROS	US	48° 43.507	123° 25.018	97		453-456	4	SR	☐	
			23:06	BO			° 43.508	° 25.010		96	-			☐	
			23:10	EN			° 43.513	° 25.008			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	