

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2018-39

DATE:

From: 7 MAY

To: 18 MAY 2018

VESSEL:

S. W. LAURIER

PROJECT(S):

LA PEROUSE, WCVI, SOG

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division

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 Laptop

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 0425

Primary CTD

Make: SBE model: 9+ serial number: 443

Primary temperature serial number: 2710

Primary conductivity serial number: 2128

Secondary temperature serial number: 4752

Secondary conductivity serial number: 2399

Transmissometer: WetLabs Model: C-Star s/n: 1185DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 3X s/n: 3641 P S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 0997 P S or NO pump?

PAR sensor: Prophorical Model: QSP2350 s/n: 70613 Surface PAR? Y / N

Other sensors: Altimeter s/n: 62355 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: SBE model: 25 serial number: 334

Primary temperature serial number: 269

Primary conductivity serial number: 2173

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model WetLabs ECO Cable gain: _____ s/n: 2215 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 0766 P, S or NO pump?

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

Other sensors: SBE 29 pressure s/n: 0482 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)

Rosette Setup:

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

Winches:

	Make:	Model:	Serial #:	Used for:
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: Seasave Version: S/N: 3274
Sampling interval (seconds): 30
Fluorometer sensor serial number: 3654 Seasport 3x gain

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)

Additional Comments:

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Month MAY				Year 2018			Vessel S.W. LAURIER			Cruise ID 2018-39					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	SI	09	02:25	BE	ROS	US	48° 39.575	123° 29.969	173		-	(24)	N ²	☒	
			02:28	BO			48° 39.574	123° 29.969		162	-(999)			☐	slow on upcast
			02:34	EN			48° 39.572	123° 29.964			-			☐	to grease winch - fire 24 bottles integrity
2	59	09	05:04	BE	ROS	US	48° 36.890	123° 14.851	235		0 - 11	11	N ²	☒	
			05:09	BO			48° 36.934	123° 14.849		224	-			☐	-5 off bottom
			05:24	EN			48° 37.238	123° 14.903			-			☐	from altimeter
3	59	09	05:48	BE	NET		48° 36.9	123° 14.8	237		-		MG	☐	from altimeter
			05:56	BO			48° 37.1	123° 14.9		227	-			☐	positions approximate
			06:03	EN			48° 37.3	123° 14.9			-			☐	from Bridge plotter
4	JF2	09	11:28	BE	NET		49° 18.06	124° 00.36	188		-		KY	☐	Bridge Sander 185
			11:34	BO			49° 18.14	124° 00.45		170	-			☐	Science Sander 187
			11:37	EN			49° 18.18	124° 00.51			-			☐	Wait off stat for Bogo Sander
5	JF2	09	12:05	BE	ROS	US	49° 17.88	124° 00.35	188		12 - 21	10	GC	☒	
			12:08	BO			49° 17.88	124° 00.35		184	-			☐	
			12:23	EN			49° 17.85	124° 00.37			-		GC	☐	
6	LB01	09	17:09	BE	ROS	US	48° 40.250	124° 59.824	376		22 - 26	5	GC	☒	
			17:11	BO			48° 40.39	124° 59.84		2726	-			☐	
			17:15	EN			48° 40.39	124° 59.85			-			☐	
			:				.	.			-			☐	

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:

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

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⇒ took chl and HPLC replicates Sample #999 Noctiluca bloom in Pat Bay BOT 1
- BOT 11 top end cap not sealed well

⇒ inadvert trip to BOT-5 winch operator did not stop

- bongo close to bottom used ship sounder instead of reading from altimeter, drift into shallower water during cast.

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Month <u>Mar</u>			Year <u>2018</u>			Vessel <u>SW Laurier</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
7	LB02	9	17:55	BE	ROS	US	48° 39.04	125° 2.35	55		27-31	5	GC	☒ ☐	top end cap didn't
			17:56	BO			48° 39.04	125° 2.35		45	-			☐ ☐	close on bot 5
			18:01	FW			48° 39.05	125° 2.35			-			☐ ☐	
8	LB03	9	18:36	BE	ROS	US	48° 37.29	125° 5.62	95		32	1	GC	☒ ☐	
			18:39	BO			48° 37.29	125° 5.68		85	-			☐ ☐	
			18:42	FW			48° 37.29	125° 5.70			-			☐ ☐	
9	LB04	9	20:37	BE	ROS	US	48° 35.645	125° 8.760	113		33-39	7	N ²	☒ ☐	
			20:39	BO			48° 35.632	125° 8.758		103	-			☐ ☐	
			20:40	EN			48° 35.587	125° 8.766			-			☐ ☐	
10	E1	9	21:42	BE	NET		48° 31.687	125° 03.834	115		-		MG	☐ ☐	Bongo
			21:45	BO			48° 31.675	125° 03.853		105	-			☐ ☐	
			21:47	EN			48° 31.699	125° 03.816			-			☐ ☐	
11	E1	9	21:57	BE	CTD		48° 31.589	125° 04.263	115		-		N ²	☒ ☐	SRL 25 off well
			22:00	BO			48° 31.587	125° 04.419		105	-			☐ ☐	deck
			22:02	EN			48° 31.587	125° 04.419			-			☐ ☐	
12	E1	9	22:26	BE	ROS	US	48° 31.724	125° 3.913	117		40-44	5	N ²	☒ ☐	extra cast for
			22:29	BO			48° 31.733	125° 3.932		112	-			☐ ☐	Matl's DICs
			22:37	EN			48° 31.801	125° 4.009			-			☐ ☐	BOT-5
			:				.	.			-			☐ ☐	

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Notes:

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Month <u>May</u>			Year <u>2018</u>			Vessel <u>Sir Wilfred Laurier</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
13	LB05	09	23:36	BE	ROS	US	48° 33.974	125° 12.074	102		45	1	N2	☒	
			23:38	BO			48° 33.970	125° 12.106		92	-			☐	
			23:41	EN			48° 33.968	125° 12.143			-			☐	
14	LB06	10	00:17	BE	ROS	US	48° 32.246	125° 15.509	115		46-53	8	N2	☒	
			00:19	BO			48° 32.244	125° 15.530		105	-			☐	
			00:29	EN			48° 32.22	125° 15.65			-			☐	
15	C1	10	01:03	BE	NET		48° 28.937	125° 15.255	152		-		MG	☐	Bongo
			01:08	BO			48° 28.868	125° 15.394		142	-			☐	
			01:11	EN			48° 28.872	125° 15.394			-			☐	
16	C1	10	01:17	BE	CTD		48° 28.860	125° 15.296	152		-		N2	☒	SBE 25 off well deck
			01:21	BO			48° 28.867	125° 15.310		142	-			☐	
			01:23	EN			48° 28.874	125° 15.315			-			☐	
17	C2	10	02:15	BE	NET		48° 26.273	125° 09.238	156		-			☐	Bongo
			02:21	BO			48° 26.306	125° 09.215		146	-			☐	
			02:23	EN			48° 26.310	125° 09.172			-			☐	
18	C2	10	02:31	BE	CTD		48° 26.301	125° 09.098	156		-			☒	SBE 25 off well deck
			02:35	BO			48° 26.322	125° 09.088		146	-			☐	
			02:37	EN			48° 26.341	125° 09.088			-			☐	
			:				.	.			-			☐	

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Month <u>MAY</u>				Year <u>2018</u>			Vessel <u>LAURIER</u>			Cruise ID <u>2018-39</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
19	C3	10	03:47	BE	NET		48° 23.331	125° 20.798	125		-	/	MG	☐ ☐	bongo
			03:51	BO			48° 23.292	125° 20.781		115	-			☐ ☐	
			03:53	EN			48° 23.289	125° 20.783			-			☐ ☐	
20	C3	10	04:01	BE	CTD		48° 23.259	125° 20.788	125		-	/	NZ	☒ ☐	SBE 25 off welldeck
			04:03	BO			48° 23.260	125° 20.786		115	-			☐ ☐	
			04:05	EN			48° 23.257	125° 20.778			-			☐ ☐	
21	LB07	10	05:05	BE	ROS	US	48° 28.744	125° 21.985	157		54-	1	NZ	☒ ☐	
			05:08	BO			48° 28.746	125° 22.007		147	-			☐ ☐	
			05:12	EN			48° 28.758	125° 22.007			-			☐ ☐	
22	LB07	10	05:29	BE	NET	-	48° 28.638	125° 21.987	154		-	-	MG	☐ ☐	bongo
			05:34	BO			48° 28.637	125° 21.964		145	-			☐ ☐	
			05:37	EN			48° 28.642	125° 21.942			-			☐ ☐	
23	B8	10	6:52	BE	NET		48° 34.52	125° 29.97	115		-		KY	☐ ☐	bongo
			6:56	BO			48° 34.52	125° 29.98		105	-			☐ ☐	
			6:58	EN			48° 34.52	125° 29.98			-			☐ ☐	
24	B8	10	7:07	BE	CTD		48° 34.50	125° 29.98	117		-		KY/AC	☐ ☐	
			7:10	BO			48° 34.51	125° 29.99		105	-			☐ ☐	
			7:12	EN			48° 34.52	125° 29.99			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Notes:

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Month MAY				Year 2018			Vessel LAURIER			Cruise ID 208-39					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
25	B7	10	8:15	BE	NET		48° 31.99	125° 35.41	80		-		KY	☐ ☐	
			8:18	BO			48° 31.98	125° 35.36		70	-			☐ ☐	
			8:22	EN			48° 31.97	125° 35.44			-			☐ ☐	
26	B7	10	8:27	BE	CTD		48° 31.97	125° 35.45	80		-		GC	☐ ☒	
			8:28	BO			48° 31.98	125° 35.45		70	-			☐ ☐	
			8:29	EN			48° 31.98	125° 35.44			-			☐ ☐	
27	LB08	10	10:02	BE	NET		48° 25.26	125° 28.60	135		-		KY	☐ ☐	
			10:08	BO			48° 25.25	125° 28.58		125	-			☐ ☐	
			10:14	EN			48° 25.23	125° 28.57			-			☐ ☐	
28	LB08	10	10:26	BE	ROS	US	48° 25.26	125° 28.66	139		55-65	11	GC	☒ ☐	
			10:30	BO			48° 25.28	125° 28.64		129	-			☐ ☐	
			10:41	EN			48° 25.32	125° 28.62			-			☐ ☐	
29	LB09	10	11:41	BE	ROS	US	48° 21.92	125° 34.85	150		66-74	9	GC	☒ ☐	
			11:44	BO			48° 21.91	125° 34.84		140	-			☐ ☐	
			11:55	EN			48° 21.87	125° 34.79			-			☐ ☐	
30	LB10	10	12:50	BE	ROS	US	48° 18.52	125° 41.21	153		75	1		☒ ☐	
			12:53	BO			48° 18.52	125° 41.19		143	-			☐ ☐	
			12:57	EN			48° 18.53	125° 41.17			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month				Year		Vessel				Cruise ID						
MAY				2018		LAURIER				2018-39						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
31	LB11	10	13:48	BE	NET		48° 15.16	125° 47.73	205		-		KY	☐ ☐		
			13:55	BO			48° 15.15	125° 47.72		195	-			☐ ☐		
			13:52	EN			48° 15.15	125° 47.73			-			☐ ☐		
32	LB11	10	14:14	BE	ROS	US	48° 15.23	125° 47.77	205		76 - 86	11	GC	☒ ☐	+ 2 CML, 1 SAL LOOPS 5032	
			14:18	BO			48° 15.20	125° 47.76		196	-			☐ ☐		
			14:33	EN			48° 15.18	125° 47.78			-			☐ ☐		
33	LB12	10	15:15	BE	ROS	US	48° 12.90	125° 51.88	510 ⁵¹⁵		-		GC	☒ ☐		
			15:24	BO			48° 12.88	125° 51.90		⁵⁰⁵ 500	87 - 102	16		☐ ☐		
			15:49	EN			48° 12.91	125° 52.10			-			☐ ☐		
34	LB13	10	16:43	BE	ROS	US	48° 10.58	125° 56.04	916		- 103	1	GC/KY	☐ ☐		
			17:01	BO			48° 10.62	125° 55.96		905	-			☐ ☐		
			17:17	EN			48° 10.67	125° 56.05			-			☐ ☐		
35	Underway Loop	10	17:34				48° 09.57	125° 57.76			5635		JD	☐ ☐	^{2 CML, 1 SAL} Underway Loop	
36	LB14	10	17:58	BE	ROS		48° 08.54	125° 59.86	1173		-		GC	☒ ☐		
			18:18	BO			48° 08.59	125° 59.91		1163	104 - 121	18		☐ ☐		
			18:55	EN			48° 08.58	125° 59.81			-			☐ ☐		
37	LB15	10	20:09	BE	ROS	US	48° 4.301	126° 8.440	1545		122	1	N ²	☒ ☐	original sounder reading	
			20:34	BO			48° 4.382	126° 8.128		1545	-			☐ ☐	BOT-10 from altimeter	
			21:00	EN			48° 4.375	126° 7.882			-			☐ ☐	fine 11 + 24 test →	

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After LB12 :

→ Check O-rings + found bottle 11 cracked @ bottom → will replace
+ changed

2xchl, 1 sal

- swapped Cracked BOT 11 for BOT 24 prior to LB15 cast.
Fixed both bottles @ bottom to test integrity

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38	LB16	10	22:12	BE	NET		48° 00.63	126° 16.88	1820		-		MG/D	☐ ☐	bongo
			22:21	BO			48° 00.59	126° 16.92		250	-			☐ ☐	
			22:25	EN			48° 00.59	126° 16.93			-			☐ ☐	
39	LB16	10	22:30	BE	NET		48° 0.5	126° 16.9	1820		-		MG	☐ ☐	deep bongo
			23:10	BO			48° 00.53	126° 16.89		1200	-			☐ ☐	
			23:32	EN			48° 00.53	126° 16.8			-			☐ ☐	
40	LB16	10	23:46	BE	ROS		48° 00.500	126° 16.805	1824		-		N ²	☒ ☐	sounder
			00:15	BO			48° 00.550	126° 16.504		1858	123 -	1		☐ ☐	→ drifted onto
			00:44	EN			48° 00.62	126° 16.28			-			☐ ☐	deeper water BOT-10
41	undrway		01:50	←	cops missed time		48° 07.35	126° 27.12			5041		N ² /MG	☐ ☐	2 dr, 1 sal
42	LC12	11	03:07	BE	NET		48° 15.03	126° 39.87	2531		-		MG	☐ ☐	bongo
			03:16	BO			48° 15.04	126° 39.80		250	-			☐ ☐	
			03:20	EN			48° 15.03	126° 39.80			-			☐ ☐	
43	LC12	11	03:25	BE	NET		48° 15.02	126° 39.72	2531		-		MG	☐ ☐	deep bongo 20ft
			04:05	BO			48° 14.96	126° 39.57		1200	-			☐ ☐	
			04:26	EN			48° 14.94	126° 39.53			-			☐ ☐	
44	LC12	11	04:43	BE	ROS		48° 14.93	126° 39.45	2530		-		N ²	☒ ☐	
			05:15	BO			48° 14.96	126° 39.16		2009	-			☐ ☐	windman overshoot
			05:43	EN			48° 14.98	126° 38.99			-			☐ ☐	

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⇒ Sounder jumping between
1850-1900m

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Month <i>May</i>				Year <i>2018</i>			Vessel <i>S.W. Laurier</i>			Cruise ID <i>2018-39</i>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
<i>45</i>	<i>LC11</i>	<i>11</i>	<i>7:03</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>48 ° 18.89</i>	<i>126 ° 26.61</i>	<i>1472</i>		<i>124-142</i>	<i>19</i>	<i>GC</i>	☒ ☐	<i>Loop 2 chl, Sal</i>
			<i>7:29</i>	<i>BO</i>			<i>48 ° 18.92</i>	<i>126 ° 26.60</i>		<i>1473</i>	<i>-</i>			☐ ☐	<i>Soft bottom poor sawyer depth</i>
			<i>8:18</i>	<i>EN</i>			<i>48 ° 18.97</i>	<i>126 ° 26.36</i>			<i>-</i>			☐ ☐	
<i>46</i>	<i>LC10</i>	<i>11</i>	<i>9:14</i>	<i>BE</i>	<i>CTD</i> <i>(ROS)</i>		<i>48 ° 22.47</i>	<i>126 ° 20.00</i>	<i>1245</i>		<i>-</i>	<i>-</i>	<i>GC</i>	☒ ☐	
			<i>9:33</i>	<i>BO</i>			<i>48 ° 22.44</i>	<i>126 ° 20.03</i>		<i>1235</i>	<i>-</i>			☐ ☐	
			<i>9:52</i>	<i>EN</i>			<i>48 ° 22.50</i>	<i>126 ° 19.894</i>			<i>-</i>			☐ ☐	
<i>47</i>	<i>LC09</i>	<i>11</i>	<i>10:44</i>	<i>BE</i>	<i>NET</i>		<i>48 ° 25.79</i>	<i>126 ° 13.60</i>	<i>598</i>		<i>-</i>		<i>KY</i>	☐ ☐	
			<i>10:55</i>	<i>BO</i>			<i>48 ° 25.78</i>	<i>126 ° 13.51</i>		<i>250</i>	<i>-</i>			☐ ☐	
			<i>11:00</i>	<i>EN</i>			<i>48 ° 25.80</i>	<i>126 ° 13.46</i>			<i>-</i>			☐ ☐	
<i>48</i>	<i>LC09</i>	<i>11</i>	<i>11:19</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>48 ° 25.86</i>	<i>126 ° 13.72</i>	<i>600</i>		<i>143-160</i>	<i>18</i>	<i>GC</i>	☒ ☐	
			<i>11:30</i>	<i>BO</i>			<i>48 ° 25.90</i>	<i>126 ° 13.66</i>		<i>607</i>	<i>-</i>			☐ ☐	
			<i>12:02</i>	<i>EN</i>			<i>48 ° 25.84</i>	<i>126 ° 13.74</i>			<i>-</i>			☐ ☐	
<i>49</i>	<i>A2</i>	<i>11</i>	<i>13:04</i>	<i>BE</i>	<i>NET</i>		<i>48 ° 22.51</i>	<i>126 ° 03.81</i>	<i>376</i>		<i>-</i>		<i>KY</i>	☐ ☐	
			<i>13:13</i>	<i>BO</i>			<i>48 ° 22.35</i>	<i>126 ° 03.75</i>		<i>250</i>	<i>-</i>			☐ ☐	
			<i>13:17</i>	<i>EN</i>			<i>48 ° 22.31</i>	<i>126 ° 03.77</i>			<i>-</i>			☐ ☐	
<i>50</i>	<i>A2</i>	<i>11</i>	<i>13:33</i>	<i>BE</i>	<i>ROS</i>		<i>48 ° 22.01</i>	<i>126 ° 04.00</i>	<i>460</i>		<i>-</i>	<i>Ø</i>	<i>MR</i>	☒ ☐	<i>RIGHT IN THE TROUGH</i>
			<i>13:43</i>	<i>BO</i>			<i>48 ° 21.93</i>	<i>126 ° 03.99</i>		<i>476</i>	<i>-</i>			☐ ☐	
			<i>13:51</i>	<i>EN</i>			<i>48 ° 21.82</i>	<i>126 ° 03.93</i>			<i>-</i>			☐ ☐	
			<i>:</i>				<i>°</i>	<i>°</i>			<i>-</i>			☐ ☐	

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Month			Year			Vessel			Cruise ID						
May			2018			S.W. Laurier			2018-39						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
51	LC08	11	15:08	BE	NET		48° 29.36	126° 07.09	205		-		KY	☐ ☐	
			15:13	BO			48° 29.36	126° 07.09		195	-			☐ ☐	
			15:17	EN			48° 29.36	126° 07.08			-			☐ ☐	
52	LC08	11	15:37	BE	ROS	VS	48° 29.41	126° 07.19	205		161 - 171	11	GC	☒ ☐	
			15:42	BO			48° 29.40	126° 07.20		193	-			☐ ☐	
			15:58	EN			48° 29.48	126° 07.15			-			☐ ☐	
53	Underway Loop	11	16:35				48° 32.174	126° 01.87			5053		MM	☐ ☐	2 chl, 1 Bal
54	LC07	11	16:52	BE	ROS		48° 32.92	126° 00.54	130		-	-	GC	☒ ☐	
			16:55	BO			48° 32.95	126° 00.51		119	-			☐ ☐	
			16:57	EN			48° 32.96	126° 00.52			-			☐ ☐	
55	LC06	11	17:52	BE	NET		48° 36.55	125° 53.92	95		-		KY	☐ ☐	
		11	17:56	BO			48° 36.52	125° 53.92		85	-			☐ ☐	
			17:57	EN			48° 36.52	125° 53.96			-			☐ ☐	
56	LC06	11	18:16	BE	ROS	VS	48° 36.70	125° 54.02	95		172 - 178	7	GC	☒ ☐	
			18:18	BO			48° 36.71	125° 53.99		83	-			☐ ☐	
			18:29	EN			48° 36.74	125° 53.85			-			☐ ☐	
57	LC05	11	19:19	BE	ROS	VS	48° 39.902	125° 47.249	65		-	-	N ²	☒ ☐	
			19:20	BO			° 39.90	° 47.236			-			☐ ☐	
			19:21	EN			° 39.90	° 47.236			-			☐ ☐	

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Month MAY				Year 2018			Vessel LAURIER			Cruise ID 2018-39					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
58	LC04	11	20:09	BE	NET		48°43.42	125°40.701	165		-		MG	☐ ☐	
			20:15	BO			48°43.42	125°40.62		155	-			☐ ☐	
			20:18	EN			48°43.41	125°40.58			-			☐ ☐	
59	LC04	11	20:32	BE	ROS		48°43.45	125°40.43	165		179-190	12	N2	☒ ☐	chl max ~20m
			20:35	BO			48°43.46	125°40.37		157	-			☐ ☐	
			20:47	EN			48°43.44	125°40.20			-			☐ ☐	
60	LC03	11	21:37	BE	ROS		48°46.83	125°34.18	145		-		N2	☒ ☐	chl max ~20m
			21:39	BO			48°46.83	125°34.15		135	-			☐ ☐	
			21:42	EN			48°46.83	125°34.14			-			☐ ☐	
61	LC02	11	22:12	BE	ROS		48°48.60	125°30.90	110		191-198	8	N2	☐ ☐	2chl, 1sal @ 5m
			22:14	BO			48°48.59	125°30.88		100	-			☒ ☐	#5061 loop
			22:23	EN			48°48.62	125°30.85			-			☐ ☐	
62	LC01	11	22:58	BE	ROS		48°50.34	125°27.64	95		199-205	7	N2	☒ ☐	big chl max ~10m
			22:59	BO			48°50.32	125°27.63		85	-			☐ ☐	
			23:07	EN			48°50.27	125°27.60			-			☐ ☐	
63	underway	11	23:24	BE	NET		48°50.65	125°28.85			-		MG	☐ ☐	Moira's surface
			23:34	EN			48°50.89	125°29.19			-			☐ ☐	drag
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAURIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
64	LD02	12	01:41	BE	NET		48° 58.46	125° 46.88	44		-		MG	☐ ☐	
			01:42	BO			48° 58.45	125° 46.88		40	-			☐ ☐	
			01:43	EN			48° 58.45	125° 46.88			-			☐ ☐	
65	LD02	12	01:55	BE	ROS	US	48° 58.45	125° 46.81	44		206-210	5	N ²	☒ ☐	
			01:56	BO			48° 58.45	125° 46.81		35	-			☐ ☐	
			02:01	EN			48° 58.46	125° 46.79			-			☐ ☐	
66	LD04	12	03:15	BE	NET		48° 53.26	125° 56.85	62		-		MG	☐ ☐	
			03:17	BO			48° 53.24	125° 56.86		52	-			☐ ☐	
			03:18	EN			48° 53.24	125° 56.85			-			☐ ☐	
67	LD04	12	03:30	BE	ROS	US	48° 53.28	125° 56.83	62		211-215	5	N ²	☒ ☐	
			03:31	BO			48° 53.27	125° 56.84		52	-			☐ ☐	
			03:36	EN			48° 53.28	125° 56.84			-			☐ ☐	
68	LG01	12	08:02	BE	ROS	US	49° 20.51	126° 34.98	56		-			☐ ☐	
			08:04	BO			49° 20.49	126° 34.96		48	216-220	5	Ge	☒ ☐	
			08:11	EN			49° 20.50	126° 34.96			-			☐ ☐	
69	LG02	12	08:42	BE	NET		49° 18.52	126° 38.15	100		-		Ky	☐ ☐	
			08:46	BO			49° 18.49	126° 38.13		90	-			☐ ☐	
			08:48	EN			49° 18.47	126° 38.11			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>May</u>			Year <u>2018</u>			Vessel <u>S.W. Hawker</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
70	LG02	12	9:06	BE	ROS	US	49° 18.69	126° 38.06	100		221 - 229	9	GC	☒ ☐	
			9:08	BO			49° 18.67	126° 38.04		90	-			☐ ☐	
			9:18	EN			49° 18.67	126° 37.99			-			☐ ☐	
71	LG03	12	10:12	BE	ROS		49° 14.93	126° 43.70	120		-		GC	☒ ☐	
			10:15	BO			49° 14.95	126° 43.68		112	-			☐ ☐	
			10:18	EN			49° 14.93	126° 43.66			-			☐ ☐	
72	LG04	12	11:10	BE	NET		49° 11.26	126° 49.38	145		-		KY	☐ ☐	
			11:15	BO			49° 11.22	126° 49.35		135	-			☐ ☐	
			11:17	EN			49° 11.23	126° 49.35			-			☐ ☐	
73	LG04	12	11:34	BE	ROS	US	49° 11.24	126° 49.22	143		230 - 238	9	GC	☒ ☐	
			11:37	BO			49° 11.25	126° 49.23			-			☐ ☐	
			11:52	EN			49° 11.20	126° 49.17			-			☐ ☐	
74	LG05	12	12:36	BE	ROS		49° 07.33	126° 55.09	270		-		GC	☒ ☐	
			12:41	BO			49° 07.32	126° 55.04		260	-			☐ ☐	
			12:47	EN			49° 07.31	126° 55.00			-			☐ ☐	
75	LG06	12	13:39	BE	ROS	US	49° 03.22	127° 01.36	1015		239 - 256	18	GC	☒ ☐	QxCHL 1 Sul Loop 5075
			13:56	BO			49° 03.23	127° 01.22		1020	-			☐ ☐	
			14:36	EN			49° 03.28	127° 01.04			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>May</u>				Year <u>2018</u>			Vessel <u>Lawrier</u>			Cruise ID <u>2018-39</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
<u>76</u>	<u>LG07</u>	<u>12</u>	<u>15:20</u>	<u>BE</u>	<u>NET</u>		<u>48 ° 59.32</u>	<u>127 ° 07.24</u>	<u>1762</u>		<u>-</u>		<u>Ky</u>	☐ ☐	<u>bongo.</u>
			<u>15:37</u>	<u>BO</u>			<u>48 ° 59.36</u>	<u>127 ° 07.19</u>		<u>250</u>	<u>-</u>			☐ ☐	
			<u>15:41</u>	<u>EN</u>			<u>48 ° 59.33</u>	<u>127 ° 07.18</u>			<u>-</u>			☐ ☐	
<u>77</u>	<u>LG07</u>	<u>12</u>	<u>15:57</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>48 ° 59.38</u>	<u>127 ° 07.03</u>	<u>1760</u>		<u>257-262</u>	<u>6</u>	<u>GC</u>	☒ ☐	<u>added DIC samples for Matt</u>
			<u>16:26</u>	<u>BO</u>			<u>48 ° 59.37</u>	<u>127 ° 06.79</u>		<u>1769</u>	<u>-</u>			☐ ☐	
			<u>17:05</u>	<u>EN</u>			<u>48 ° 59.58</u>	<u>127 ° 06.52</u>			<u>-</u>			☐ ☐	
<u>78</u>	<u>LG08</u>	<u>12</u>	<u>18:09</u>	<u>BE</u>	<u>ROS</u>		<u>48 ° 55.314</u>	<u>127 ° 13.440</u>	<u>2062</u>		<u>-</u>	<u>Ø</u>	<u>KY</u>	☒ ☐	
			<u>18:39</u>	<u>BO</u>			<u>48 ° 55.289</u>	<u>127 ° 13.229</u>		<u>2005</u>	<u>-</u>			☐ ☐	
			<u>19:10</u>	<u>EN</u>			<u>48 ° 55.307</u>	<u>127 ° 13.151</u>			<u>-</u>			☐ ☐	
<u>79</u>	<u>LG09</u>	<u>12</u>	<u>20:08</u>	<u>BE</u>	<u>NET</u>		<u>48 ° 51.16</u>	<u>127 ° 19.31</u>	<u>2052</u>		<u>-</u>		<u>MG</u>	☐ ☐	<u>bongo</u>
			<u>20:16</u>	<u>BO</u>			<u>48 ° 51.11</u>	<u>127 ° 19.33</u>		<u>250</u>	<u>-</u>			☐ ☐	
			<u>20:21</u>	<u>EN</u>			<u>48 ° 51.09</u>	<u>127 ° 19.33</u>			<u>-</u>			☐ ☐	
<u>80</u>	<u>LG09</u>	<u>12</u>	<u>20:25</u>	<u>BE</u>	<u>NET</u>		<u>48 ° 51.12</u>	<u>127 ° 19.33</u>	<u>2052</u>		<u>-</u>		<u>MG</u>	☐ ☐	<u>deep bongo</u>
			<u>21:05</u>	<u>BO</u>			<u>48 ° 50.99</u>	<u>127 ° 19.21</u>		<u>1200</u>	<u>-</u>			☐ ☐	
			<u>21:25</u>	<u>EN</u>			<u>48 ° 50.87</u>	<u>127 ° 19.18</u>			<u>-</u>			☐ ☐	
<u>81</u>	<u>LG09</u>	<u>12</u>	<u>21:38</u>	<u>BE</u>	<u>ROS</u>		<u>48 ° 51.109</u>	<u>127 ° 19.36</u>	<u>2052</u>		<u>263-269</u>	<u>7</u>	<u>N²</u>	☒ ☐	
			<u>22:11</u>	<u>BO</u>			<u>48 ° 50.962</u>	<u>127 ° 19.114</u>		<u>2005</u>	<u>-</u>			☐ ☐	
			<u>22:54</u>	<u>EN</u>			<u>48 ° 50.87</u>	<u>127 ° 18.70</u>			<u>-</u>			☐ ☐	
<u>82</u>	<u>undelay</u>	<u>13</u>	<u>00:56</u>				<u>49 ° 01.57</u>	<u>127 ° 29.73</u>			<u>5082</u>		<u>N²/MG</u>	☐ ☐	<u>2 chl, 1 sal</u>

Event Type:

BOT = Bottle cast (no CTD)
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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>MAY</u>			Year <u>2018</u>			Vessel <u>LAUREL</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
83	Underway	13	05:16				49° 30.577	127° 58.848			5083		MG/NL	☐ ☐	2 chl, 1 sal
84	LBP8	13	14:02	BE	NET		49° 48.60	128° 16.79	2070		-			☐ ☐	
			14:11	BO			49° 48.48	128° 16.76		250	-		KY	☐ ☐	
			14:16	EN			49° 48.47	128° 16.77			-			☐ ☐	
85	LBP8	13	14:29	BE	CTD(8)		49° 48.50	128° 16.71	2070		-		KY	☐ ☐	Testing SBE25 to see
			14:30	BO			49° 48.47	128° 16.67		50	-			☐ ☐	
			14:31	EN			49° 48.47	128° 16.67			-			☐ ☐	
86	LBP8	13	14:43	BE	ROS.	US	49° 48.37	128° 16.79	2070		-			☐ ☐	
			14:55	BO			49° 48.27	128° 16.67		1005	270 - 276	7	GC	☒ ☐	Out of order.
			15:25	EN			49° 48.21	128° 16.52			-			☐ ☐	
87	LBP7	13	16:15	BE	NET		49° 52.38	128° 11.16	2137		-			☐ ☐	
			16:24	BO			49° 52.25	128° 11.14		260	-			☐ ☐	
			16:28	EN			49° 52.20	128° 11.16			-			☐ ☐	
88	LBP7	13	16:44	BE	ROS	US	49° 52.40	128° 11.19	2200		-			☐ ☐	
			17:51	BO			49° 52.36	128° 11.14		2005	277 - 297	21	GC	☒ ☐	Loop 2x chl, 1 sal
			18:13	EN			49° 52.44	128° 11.07			-			☐ ☐	
89	LBP6	13	19:20	BE	ROS	US	49° 56.032	128° 5.560	951		-		NL	☒ ☐	Wend noise in
			19:36	BO			° 55.880	° 5.603		980	-			☐ ☐	fluorometer @ 500m
			19:52	EN			° 55.712	° 5.604			-			☐ ☐	10 off bottom

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BOT 951 from scanner

If settings changed by Glenn + Kelly increase the data. Recently it seems that it is only displaying the avg of 8 readings so the data looks like steps. Germaine thinks there is something going on with the pressure sensor. We changed the real-time data acquisition from 1 to 8.

⇒ Niskin 11 tension tubing snapped prior to last skipping for next rosette
no time to fix

- not enough material to fix, not sure how to determine length of silicone tubing
Swapped Niskin 11 for 23, position 23 now not operational

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Month MAY			Year 2019			Vessel LAURIER			Cruise ID 2018-39				
Event Number	Station Name	Day	Time (UTC)	Time	Latitude	Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
83	Underway				49° 59.98	128° 00.20	1289		-		MG	☐	
84					49° 59.92	128° 00.24		250	-			☐	
					49° 59.88	128° 00.27			-			☐	
					50° 00.00	128° 00.245	1289		298-316	19	N ²	☒	BOT 16 & 17 both
					49° 59.86	128° 00.216		1280	-			☐	fired @ 20m,
					49° 59.66	128° 00.287			-			☐	missed 30m
			23:01	BE	50° 01.411	127° 58.07	1054		-		N ²	☒	no good read on
			23:19	BO	50° 01.357	127° 58.004		1079	-			☐	seal under depth from
			23:35	EN	50° 01.397	127° 57.919			-			☐	plan, max cast
93	LBP3	14	00:31	BE	50° 03.18	127° 55.28	169		-		MG	☐	pressure BOT-16
			00:37	BO	50° 03.18	127° 55.31		160	-			☐	
			00:40	EN	50° 03.19	127° 55.32			-			☐	
94	LBP3	14	00:52	BE	50° 3.24	127° 55.27	165		317-328	12	N ²	☒	2 chl, 1 sup @ 5m loop
			00:55	BO	50° 3.256	127° 55.27		155	-			☐	5094 7 off bottom
			01:07	EN	50° 3.289	127° 55.24			-			☐	
95	LBP2	14	01:28	BE	50° 03.98	127° 54.10	94		-		MG	☐	
			01:30	BO	50° 03.97	127° 54.06		85	-			☐	
			01:30	EN	50° 03.96	127° 54.04			-			☐	
			:		.	.			-			☐	

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 DN = Down / No stop

Notes:

Time Code:

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAURION</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
96	LBP2	14	01:45	BE	ROS	✓	50° 03.99	127° 54.02	98		—	Ø	MR	☒ ☐	
			01:47	BO			50° 03.97	127° 53.99		89	-			☐ ☐	
			01:48	EN			50° 03.98	127° 53.98			-			☐ ☐	
97	LBP1.5	14	02:12	BE	ROS		50° 04.35	127° 53.39	73		-		N2	☒ ☐	6.5 cables from station bk of drifter
			02:13	BO			50° 04.35	127° 53.39		65	-			☐ ☐	
			02:15	EN			50° 04.35	127° 53.39			-			☐ ☐	
98	underway	14	02:50	BE	NET		50° 08.21	127° 58.13			-		MG/N	☐ ☐	Neustrom surface larval fish
			03:10	EN			50° 05.69	127° 59.06			-			☐ ☐	
99	underway	14	04:15		LOOP		50° 13.59	128° 7.17			5099		N2	☐ ☐	2 chl, 1 sal
100	CPE2	14	8:18	BE	NET		50° 43.02	128° 39.69	128		-		KY	☐ ☐	
			8:22	BO			50° 42.97	128° 39.66		118	-			☐ ☐	
			8:25	EN			50° 42.96	128° 39.65			-			☐ ☐	
101	CPE2	14	8:41	BE	ROS		50° 42.91	128° 39.66	130		—	—	GC	☒ ☐	Fired bottle #11 for a test @ bottom
			8:43	BO			50° 42.92	128° 39.68		120	-			☐ ☐	
			8:46	EN			50° 42.93	128° 39.70			-			☐ ☐	
102	Sponge Bob 824/14		9:52		DRF		50° 40.83	128° 52.75			-		RS/GC	☐ ☐	Sponge Bob # 874
103	Loop Underway		10:10		Loop		50° 40.27	128° 56.70			5103		GC	☐ ☐	#5 103 2xchl 1sal
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Bottle Firing Method:

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Notes:

Time Code:

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Prior to cast CP22 made tygon hose for N23^(originally N11) as the hose had snapped. Niva had a hard time loading N11 (originally N23) as the upper lanyard was too short. Unable to find the box with

No samples taken. Closed properly + no leaks.

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Month <u>May</u>			Year <u>2017</u>			Vessel <u>Lawler</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
104	LQ03	14	10:41	BE	NET		50° 39.58	129° 01.85	1250		-		KY	☐ ☐	
			10:49	BO			50° 39.59	129° 01.79		250	-			☐ ☐	
			10:54	EN			50° 39.54	129° 01.80			-			☐ ☐	
105	LQ03	14	11:15	BE	ROS		50° 39.50	129° 01.88	1290		-		GC	☒ ☐	
			11:36	BO			50° 39.41	129° 01.76		1369	-			☐ ☐	Drifting off a slope
			11:57	EN			50° 39.34	129° 01.73			-			☐ ☐	during cast.
106	J122	14	13:15	BE	ROS		50° 39.77	129° 17.46	1400		-		GC	☒ ☐	
			13:37	BO			50° 39.78	129° 17.41		1525	-			☐ ☐	
			14:01	EN			50° 39.71	129° 17.29			-			☐ ☐	
107	J122	14	14:13	BE	NET		50° 39.74	129° 17.51			-			☐ ☐	
			14:23	BO			50° 39.70	129° 17.67		250	-			☐ ☐	
			14:28	EN			50° 39.62	129° 17.69			-			☐ ☐	
108	CS00	14	17:32	BE	NET		50° 27.57	129° 55.20	2170		-			☐ ☐	bongo
			17:41	BO			50° 27.51	129° 55.36		250	-			☐ ☐	
			17:47	EN			50° 27.49	129° 55.45			-			☐ ☐	
109	CS00	14	17:52	BE	NET		50° 27.46	129° 55.52	2170		-			☐ ☐	deep bongo
			18:23	BO			50° 27.16	129° 56.20		1200 1250	-			☐ ☐	
			18:55	EN			50° 26.96	129° 56.57			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Bottle Firing Method:

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

Time Code:

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Notes:

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAURIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
110	CS00	14	19:11	BE	ROS	US	50° 27.24	129° 56.44	2170		329-349	21	N ²	☒ ☐	~1 mile from station
			19:42	BO			50° 27.33	129° 56.62		2005	-			☐ ☐	high winds, this
			20:29	EN			50° 27.34	129° 56.79			-			☐ ☐	watch not keeping station
111	CS01	14	22:01	BE	NET		50° 34.85	129° 41.44	2105		-		MG	☐ ☐	
			22:09	BO			50° 34.80	129° 41.46		250	-			☐ ☐	
			22:13	EN			50° 34.78	129° 41.47			-			☐ ☐	
112	CS01	14	22:25	BE	ROS	US	50° 34.90	129° 41.44	2106		350-351	2	N ²	☒ ☐	
			22:56	BO			° 34.78	° 41.36		2005	-			☐ ☐	
			23:26	EN			° 34.70	° 41.27			-			☐ ☐	
113	CS02	15	00:58	BE	NET		50° 41.28	129° 27.99	1901		-		MG	☐ ☐	
			01:07	BO			50° 41.17	129° 28.06		250	-			☐ ☐	
			01:11	EN			50° 41.16	129° 28.07			-			☐ ☐	
114	CS02	15	01:25	BE	ROS	us	50° 41.18	129° 28.09	1905		352-372	21	N ²	☒ ☐	Bot 11 top skewed
			01:53	BO			° 40.99	° 28.12		1917	-			☐ ☐	off on way up =>
			02:38	EN			° 40.76	° 28.18			-			☐ ☐	
115	CS03	15	03:36	BE	NET		50° 45.651	129° 20.085	235		-			☐ ☐	
			03:45	BO			° 45.662	° 20.143		230	-	-	MG, NN	☐ ☐	
			03:48	EN			° 45.693	° 20.157			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Bottle Firing Method:

US = Up / Stop (default)
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Notes:

Time Code:

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⇒ Suspect plastic fatigue, very old bottle, no sample
BOT 1 - bottom end cap dripping

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAVERIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
116	CS03	15	04:03	BE	ROS		50° 45.61	129° 20.23	244		-	/	N ²	☒ ☐	- altimeter spiking on way down
			04:07	BO			° 45.61	° 20.22		234	-	/		☐ ☐	
			04:11	EN			° 45.64	° 20.22			-	/		☐ ☐	
117	CS04	15	05:02	BE	NET		50° 49.29	129° 12.99	97		-		MG	☐ ☐	
			05:05	BO			° 49.35	° 12.99		90	-	/		☐ ☐	
			05:07	EN			° 49.37	° 12.99			-	/		☐ ☐	
118	CS04	15	05:19	BE	ROS		50° 49.29	129° 12.95	97		373-379		N ²	☒ ☐	
			05:26	BO			° 49.30	° 12.95		90	-	/		☐ ☐	
			05:28	EN			° 49.36	° 12.87			-	/		☐ ☐	
119	CS04	15	05:32	DE	DRF		50° 49.358	129° 12.889	100		-	/	N ²	☐ ☐	#1876
120	CS3B	15	07:32	BE	NET		50° 59.87	129° 26.99	222		-		KY.	☐ ☐	
			07:40	BO			50° 59.87	129° 26.99		212	-	/		☐ ☐	
			7:43	EN			50° 59.86	129° 27.07			-	/		☐ ☐	
121	CS3B	15	08:04	BE	ROS		50° 59.86	129° 27.04	220		-	/	GC	☒ ☐	
			08:08	BO			50° 59.84	129° 27.04		210	-	/		☐ ☐	
			08:13	EN			50° 59.82	129° 27.01			-	/		☐ ☐	
122	Vaderway	15	08:32	BE	LOOP		50° 59.48	129° 24.42			5122	/	RS	☐ ☐	2 CHL 1 Sal
			:				° .	° .			-	/		☐ ☐	
			:				° .	° .			-	/		☐ ☐	

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⇒ marta C53B cast swapped broken bottle 11 for original bot 24, broken 11⁽²³⁾ in position 23. Swapped the
lanyard that was on N11 that blew apart onto the Niskin that is now in position N11 (also N24)
^back

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Month <u>May</u>			Year <u>2018</u>			Vessel <u>LAURIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
123	CS05	15	10:19	BE	NET		50° 55.82	129° 00.02	64		-		KY	☐ ☐	
			10:22	BO			50° 55.78	129° 00.05		54	-			☐ ☐	
			10:23	EN			50° 55.76	129° 00.07			-			☐ ☐	
124	CS05	15	10:41	BE	ROS		50° 55.85	129° 00.13	65		-		GC	☒ ☐	
			10:42	BO			50° 55.83	129° 00.14		55	-			☐ ☐	
			10:44	EN			50° 55.81	129° 00.14			-			☐ ☐	
125	CS05	15	10:51	EN	DRF		50° 55.90	128° 59.97	65		-		GC/RS	☐ ☐	# 873, 875 Spine
126	CS1B	15	12:35	BE	NET		50° 52.71	128° 40.65	67		-		KY	☐ ☐	
			12:37	BO			50° 52.68	128° 40.70		57	-			☐ ☐	
			12:38	EN			50° 52.66	128° 40.73			-			☐ ☐	
127	CS1B	15	12:54	BE	ROS		50° 52.54	128° 41.02	61		-		GC	☒ ☐	
			12:56	BO			50° 52.54	128° 41.05		52	-			☐ ☐	
			12:57	EN			50° 52.55	128° 41.08			-			☐ ☐	
128	CS06	15	14:34	BE	NET		50° 59.92	128° 51.88	63		-		KY	☐ ☐	
			14:37	BO			50° 59.94	128° 51.95		53	-			☐ ☐	
			14:38	EN			50° 59.93	128° 51.96			-			☐ ☐	
129	CS06	15	14:55	BE	ROS	VS	50° 59.95	128° 52.04	65		380-386	7	GC	☒ ☐	
			14:57	BO			50° 59.96	128° 52.02		55	-			☐ ☐	
			15:06	EN			50° 59.99	128° 52.06			-			☐ ☐	

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
 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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4 cables from station due to a halibut fish boat being on the station.

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Month <u>May</u>			Year <u>2018</u>			Vessel <u>S.W. Lauer</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
130	CS07	15	16:06	BE	NET		51° 04.53	128° 44.13	64		-		KY	☐ ☐	
			16:10	BO			51° 04.56	128° 44.16		53	-			☐ ☐	
			16:11	EN			51° 04.56	128° 44.16			-			☐ ☐	
131	CS07	15	16:29	BE	ROS		51° 04.62	128° 44.16	63		-		GC	☒ ☐	
			16:31	BO			51° 04.62	128° 44.16		54	-			☐ ☐	
			16:32	EN			51° 04.62	128° 44.15			-			☐ ☐	
132	CS08	15	17:36	BE	NET		51° 08.46	128° 35.98	143		-		KY	☐ ☐	
			17:41	BO			51° 08.45	128° 36.00		133	-			☐ ☐	
			17:44	EN			51° 08.44	128° 36.01			-			☐ ☐	
133	CS08	15	18:00	BE	ROS		51° 08.47	128° 35.96	143		-		GC	☒ ☐	
			18:02	BO			51° 08.52	128° 35.97		136	-			☐ ☐	
			18:06	EN			51° 08.50	128° 35.94			-			☐ ☐	
134	CS09	15	19:10	BE	NET		51° 12.45	128° 27.96	196		-		MG	☐ ☐	
			19:17	BO			51° 12.4	128° 27.9			-			☐ ☐	
			19:20	EN			51° 12.40	128° 27.88			-			☐ ☐	
135	CS09	15	19:32	BE	ROS	US	51° 12.38	128° 27.81	196		387-398	12	NZ	☒ ☐	oops. winchman drove
			19:37	BO			51° 12.39	128° 27.80		190	-			☐ ☐	it down to 2m from
			19:49	EN			51° 12.41	128° 27.71			-			☐ ☐	bottom
			:				°	°			-			☐ ☐	

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

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Produced by the Water Properties Group, IOS

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- BOT II top end cap not seated properly
spigot running despite vent closed

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAVRIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
136	CS10	15	20:34	BE	NET		51° 16.52	128° 19.85	81		-		MG	☐ ☐	
			20:37	BO			51° 16.50	128° 19.82		75	-			☐ ☐	
			20:38	EN			51° 16.49	128° 19.82			-			☐ ☐	
137	CS10	15	20:50	BE	ROS		51° 16.47	128° 19.79	81		-		N2	☒ ☐	
			20:51	BO			51° 16.47	128° 19.79			-			☐ ☐	
			20:53	EN			51° 16.47	128° 19.78			-			☐ ☐	
138	SS6	15	22:07	BE	NET		51° 20.01	127° 59.94	180		-		MG	☐ ☐	
			22:13	BO			51° 19.96	127° 59.93		170	-			☐ ☐	
			22:15	EN			51° 19.94	127° 59.93			-			☐ ☐	
139	SS6	15	22:27	BE	ROS		51° 19.97	127° 0.06	180		-		N2	☒ ☐	
			22:31	BO			51° 19.94	127° 0.05		171	-			☐ ☐	
			22:34	EN			51° 19.93	127° 0.05			-			☐ ☐	
140	underway	15	23:39		LOOP		51° 24.23	128° 15.76			-		N2	☐ ☐	#5140 2chl, 1 sal
141	SS5	16	00:37	BE	NET		51° 27.97	128° 30.08	200		-		MG	☐ ☐	
			00:44	BO			51° 27.89	128° 30.13		190	-			☐ ☐	
			00:47	EN			51° 27.86	128° 30.16			-			☐ ☐	
142	SS5	16	01:00	BE	ROS		51° 27.88	128° 30.39	200		399-401	3	N2	☒ ☐	
			01:03	BO			51° 27.87	128° 30.44		190	-			☐ ☐	
			01:08	EN			51° 27.84	128° 30.44			-			☐ ☐	

Event Type:

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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
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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAURIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
143	SS4	16	02:50	BE	NET		51° 21.179	128° 00.095	238		-	-	MG, NN	☐ ☐	
			02:58	BO			° 21.123	129° 00.198		225	-			☐ ☐	
			03:02	EN			° 21.106	129° 00.233			-			☐ ☐	
144	SS4	16	03:14	BE	ROS		51° 21.11	128° 00.23	238		-		N ²	☒ ☐	
			03:18	BO			51° 21.11	128° 0.24		230	-			☐ ☐	
			03:22	EN			51° 21.13	128° 0.21			-			☐ ☐	
145	underway	16	04:12	DE	DRF		51° 17.15	129° 13.45			-		N ²	☐ ☐	#877
146	SS3	16	04:45	BE	NET		51° 14.996	129° 21.271	291		-	-	MG, NN	☐ ☐	
			04:54	BO			° 14.985	° 21.222		250	-			☐ ☐	
			04:58	EN			° 14.980	° 21.204			-			☐ ☐	
147	SS3	16	05:11	BE	ROS	JS	51° 15.01	129° 21.07	291		402-404	3	N ²	☒ ☐	
			05:16	BO			° 15.03	° 20.98		281	-			☐ ☐	
			05:23	EN			° 15.05	° 20.96			-			☐ ☐	
148	SS2	16	06:45	BE	ROS	JS	51° 13.03	129° 42.90	577		405-407	3	N ² /GC	☒ ☐	
		16	06:55	BO			51° 13.02	129° 42.80			-			☐ ☐	
		16	07:09	EN			51° 13.01	129° 42.72			-			☐ ☐	
149	SS2	16	07:19	BE	NET		51° 12.91	129° 42.80	577		-		KY	☐ ☐	
		16	07:25	BO			51° 12.86	129° 42.81		250	-			☐ ☐	went to 255m due to wire angle
		16	07:34	EN			51° 12.86	129° 42.79			-			☐ ☐	

Event Type:

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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
 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: _____

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAUREL</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
150	CPEI	16	13:44	BE	NET		51° 00.01	127° 49.94	145		-		KY	☐ ☐	
			13:50	BO			51° 00.03	127° 49.98		143	-			☐ ☐	
			13:52	EN			51° 00.06	127° 50.02			-			☐ ☐	
151	CPEI	16	14:10	BE	ROS		50° 59.97	127° 50.12	147		/	/	GC	☒ ☐	
			14:13	BO			50° 59.97	127° 50.20		137	-			☐ ☐	
			14:17	EN			50° 59.94	127° 50.30			-			☐ ☐	
152	underway	16	19:13		LOOP		50° 35.56	126° 43.12			5152		MG/N ²	☐ ☐	2 chl, 1 sal #5152
153	JS	16	20:28	BE	NET		50° 29.79	126° 28.49	406	-	-		MG	☐ ☐	
			20:42	BO			50° 29.81	126° 28.31		395	-			☐ ☐	slowed stop @ 50 m on
			20:49	EN			50° 29.81	126° 28.16			-			☐ ☐	way up to fix angle
154	JS	16	21:02	BE	ROS	US	50° 29.82	126° 28.33	405		408-419	12	N ²	☒ ☐	@ 35 m slowed descent 1.2 → 1 m/s
			21:08	BO			50° 29.84	126° 28.21		395	-			☐ ☐	
			21:25	EN			50° 29.89	126° 27.72			-			☐ ☐	
155	16	17	03:42	BE	NET		49° 57.68	125° 08.85	160		-			☐ ☐	
			03:42	BO			49° 57.68	125° 08.95		150	-			☐ ☐	
			03:50	EN			49° 57.70	125° 09.01			-			☐ ☐	
156	16	17	04:02	BE	ROS	US	49° 57.67	125° 08.78	160		420-430	11	N ²	☒ ☐	
			04:05	BO			49° 57.65	125° 08.85		150	-			☐ ☐	
			04:17	EN			49° 57.57	125° 09.11			-			☐ ☐	

Event Type:

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MOR = Mooring

NET = Plankton Net Haul

DRF = Drifter

=

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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Seapoint fluorometer (s/n 3641) data looked spiky. Cleaned connectors w/ electronics contact cleaner at both connection end. Applied underwater connector lubricant + reconnected cables to sensor + SBE 9+

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Month <u>MAY</u>			Year <u>2018</u>			Vessel <u>LAVALIER</u>			Cruise ID <u>2018-39</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
157	14	17	05:12	BE	ROS	US	49° 53.02	124° 59.45	317		431-433	3	N ²	☒ ☐	
			05:18	BO			49° 53.00	124° 59.41		307	-			☐ ☐	
			05:25	EN			49° 52.99	124° 59.39			-			☐ ☐	
158	14	17	05:33	BE	NET		49° 53.011	124° 59.435	317		-	-	MG	☐ ☐	
			05:44	BO			49° 52.969	124° 59.448		305	-			☐ ☐	
			05:49	EN			49° 52.956	124° 59.474			-			☐ ☐	
159	Underway	17	06:02	BE	NET		49° 53.05	124° 59.67			-		MG	☐ ☐	neuston tow
			06:12	EN			49° 53.31	125° 00.14			-			☐ ☐	for larval fish
160	Underway	17	07:02	EN	Loop		49° 49.01	124° 57.01			5160		RS/GC	☐ ☐	2x CUC 1 Sal
161	11	17	08:14	BE	NET		49° 42.50	124° 43.24	303		-		KY	☐ ☐	
			08:24	BO			49° 42.51	124° 43.24		293	-			☐ ☐	
			08:29	EN			49° 42.51	124° 43.23			-			☐ ☐	
162	11	17	08:45	BE	ROS		49° 42.48	124° 43.22	303		-		GC	☒ ☐	
			08:50	BO			49° 42.48	124° 43.21		293	-			☐ ☐	
			08:55	EN			49° 42.47	124° 43.21			-			☐ ☐	
163	12	17	09:17	BE	NET		49° 43.52	124° 40.83	353		-		KY	☐ ☐	
			09:28	BO			49° 43.48	124° 40.80		343	-			☐ ☐	
			09:34	EN			49° 43.45	124° 40.77			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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 DRF = Drifter

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

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Produced by the Water Properties Group, IOS

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Month <u>MAY</u>				Year <u>2018</u>			Vessel <u>LAURIER</u>				Cruise ID <u>2018-39</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
164	12	17	09:50	BE	ROS	US	49° 43.47	124° 40.73	353		434 - 437	4	GC	☒ ☐	Flowmeters on
			09:56	BO			49° 43.48	124° 40.70		343	-			☐ ☐	rosette for flow
			10:10	EN			49° 43.48	124° 40.69			-			☐ ☐	calibration
165	CPF2	17	12:03	BE	NET		49° 28.01	124° 29.95	326		-		KY	☐ ☐	
			12:14	BO			49° 28.00	124° 29.97		316	-			☐ ☐	
			12:19	EN			49° 27.98	124° 29.97			-			☐ ☐	
166	CPF2	17	12:31	BE	ROS	US	49° 21.97	124° 29.97	327		438 - 440	3	GC	☒ ☐	
			12:39	BO			49° 27.97	124° 29.98		319	-			☐ ☐	
			12:48	EN			49° 27.95	124° 29.98			-			☐ ☐	
167	CPF1	17	14:38	BE	NET		49° 21.96	124° 04.97	245		-		KY	☐ ☐	
			14:45	BO			49° 21.94	124° 04.98		233	-			☐ ☐	
			14:49	EN			49° 21.93	124° 04.98			-			☐ ☐	
168	CPF1	17	15:01	BE	ROS		49° 21.94	124° 04.95	244		/	/	GC	☐ ☐	
			15:02	BO			49° 21.94	124° 04.95		SD	-			☐ ☐	for Flowmeter
			15:04	EN			49° 21.94	124° 04.95			-			☐ ☐	calibration
169	CPF1	17	15:12	BE	ROS	US	49° 21.92	124° 04.95	246		441 - 443	3	GC	☒ ☐	
			15:17	BO			49° 21.95	124° 04.95		236	-			☐ ☐	
			15:24	EN			49° 22.00	124° 04.96			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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 SET = Fish Set

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DRF = Drifter

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Bottle Firing Method:

US = Up / Stop (default)

UN = Up / No stop

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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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MR = Messenger Release Time

RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

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Month <u>May</u>				Year <u>2018</u>			Vessel <u>S.W. Lawner</u>			Cruise ID <u>2018-39</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
170	24	17	16:27	BE	NET		49° 30.38	124° 06.01	431		-		KY	☐ ☐	
			16:40	BO			49° 30.42	124° 06.07		421	-			☐ ☐	
			16:47	EN			49° 30.46	124° 06.08			-			☐ ☐	
171	24	17	16:59	BE	ROS	US	49° 30.52	124° 06.09	431		444 - 446	3	GC	☒ ☐	
			17:07	BO			49° 30.55	124° 06.18		419	-			☐ ☐	
			17:19	EN			49° 30.63	124° 06.33			-			☐ ☐	
172	22	17	18:33	BE	NET		49° 40.30	124° 16.43	353		-		KY/MG	☐ ☐	
			18:45	BO			49° 40.38	124° 16.40		343	-			☐ ☐	
			18:56	EN			49° 40.43	124° 16.41			-			☐ ☐	
173	22	17	19:01	BE	ROS		49° 40.40	124° 16.28	355		447 - 457	11	N ²	☒ ☐	
			19:07	BO			49° 40.41	124° 16.35		345	-			☐ ☐	
			19:21	EN			49° 40.43	124° 16.44			-			☐ ☐	
174	28	17	23:08	BE	NET		49° 24.13	123° 45.48	134		-		MG	☐ ☐	
			23:12	BO			49° 24.18	123° 45.59		127	-			☐ ☐	
			23:14	EN			49° 24.19	123° 45.62			-			☐ ☐	
175	28	17	23:27	BE	ROS		49° 24.18	123° 45.57	134		458 - 460	3	N ²	☒ ☐	
			23:29	BO			49° 24.20	123° 45.64		124	-			☐ ☐	
			23:33	EN			49° 24.23	123° 45.74			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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

US = Up / Stop (default)
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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>MAY</u>				Year <u>2018</u>			Vessel <u>LAVRIER</u>			Cruise ID <u>2018-39</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
176	GEO1	18	00:48	BE	ROS	US	49° 15.04	123° 44.98	404		461-471	11	N ²	☒	
			00:55	BO			49° 15.07	123° 45.00		390	-			☐	
			01:09	EN			49° 15.18	123° 45.07			-			☐	
177	GEO1	18	01:17	BE	NET		49° 15.17	123° 45.06	404		-		MG	☐	100m bongo
			01:21	BO			49° 15.21	123° 45.06		100	-			☐	
			01:23	EN			49° 15.22	123° 45.07			-			☐	
178	GEO1	18	01:27	BE	NET		49° 15.23	123° 45.02	404		-		MG	☐	BONGO
			01:41	BO			49° 15.38	123° 45.05		390	-			☐	
			01:47	EN			49° 15.44	123° 45.06			-			☐	
179	38	18	03:18	BE	NET		49° 12.02	123° 26.44	309		-			☐	
			03:28	BO			49° 12.04	123° 26.45		300	-			☐	
			03:33	EN			49° 12.05	123° 26.44			-			☐	
180	38	18	03:45	BE	ROS	US	49° 11.99	123° 26.44	310		472-474	3	N ²	☒	
			03:50	BO			49° 12.01	123° 26.48		300	-			☐	
			03:58	EN			49° 12.00	123° 26.52			-			☐	
181	42	18	05:13	BE	NET		49° 01.84	123° 26.12	320		-		MG	☐	
			05:23	BO			49° 01.85	123° 26.14		310	-			☐	
			05:	EN			49° 01.85	123° 26.16			-			☐	
			:				°	°			-			☐	

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Month <u>MAY</u>				Year <u>2018</u>			Vessel <u>LAVALIER</u>			Cruise ID <u>2018-39</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
<u>182</u>	<u>42</u>	<u>18</u>	<u>05:41</u>	<u>BE</u>	<u>ROS</u>	<u>US</u>	<u>49° 01.80</u>	<u>123° 26.24</u>	<u>320</u>		<u>475-485</u>	<u>11</u>	<u>N2</u>	☒ ☐	<u>fluorometer</u>
			<u>05:46</u>	<u>BO</u>			<u>49° 01.78</u>	<u>123° 26.26</u>		<u>310</u>	<u>-</u>			☐ ☐	<u>v. spiky</u>
			<u>06:00</u>	<u>EN</u>			<u>49° 01.71</u>	<u>123° 26.32</u>			<u>-</u>			☐ ☐	
<u>183</u>	<u>41</u>	<u>18</u>	<u>06:38</u>	<u>BE</u>	<u>NET</u>		<u>49° 03.25</u>	<u>123° 22.34</u>	<u>245</u>		<u>-</u>	<u>-</u>	<u>MG</u>	☐ ☐	
			<u>06:46</u>	<u>BO</u>			<u>49° 03.23</u>	<u>123° 22.39</u>		<u>230</u>	<u>-</u>			☐ ☐	
			<u>06:50</u>	<u>EN</u>			<u>49° 03.23</u>	<u>123° 22.42</u>			<u>-</u>			☐ ☐	
<u>184</u>	<u>41</u>	<u>18</u>	<u>07:10</u>	<u>BE</u>	<u>ROS</u>		<u>49° 3.25</u>	<u>123° 22.54</u>	<u>245</u>		<u>-</u>	<u>/</u>	<u>N2</u>	☒ ☐	
			<u>07:15</u>	<u>BO</u>			<u>49° 3.22</u>	<u>123° 22.60</u>		<u>240</u>	<u>-</u>	<u>/</u>		☐ ☐	<u>-10 off bottom</u>
			<u>07:21</u>	<u>EN</u>			<u>49° 3.21</u>	<u>123° 22.65</u>			<u>-</u>	<u>/</u>		☐ ☐	<u>pause @ 10m on</u>
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	<u>way up straighter</u>
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	<u>wire</u>
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	
			<u>:</u>				<u>° .</u>	<u>° .</u>			<u>-</u>			☐ ☐	

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