

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2018 - 032

DATE:

From: 21 NOV 2018

To: 26 NOV 2018

VESSEL:

CCGS VECTOR

PROJECT(S):

STRAIT OF GEORGIA / JUAN DE FUCA
WATERPROPERTIES SURVEY

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

WaterProperties.ca

Captain: PETE SLOAN First Officer: DALE UNROTH

Second Officer: CHRIS STONES Third Officer: _____

Fishing Master: BOSUN MIKE PETRIC Chief Engineer: _____

Mission Participants / Agencies:

Δ
Σ
Θ

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

1st Leg Scientific Personnel: Chief Scientist: PETER CHADLER

Name	Watch	Cabin
PETER CHAUDUR	1	1
HAYLOCK RADOS	1	4
CINDY WRIGHT	2	4
KENNY SCORAFANA	1	2
CARUS CLARKE	2	2
SCOTT ROSE	2	3

2nd Leg Scientific Personnel: Chief Scientist:

[illegible]

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

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

Data logging computer: Vector laptop

Data acquisition program: Seasave

CTD deck unit make: SBF model: 11+ serial number: _____

Primary CTD

Make: SBF model: C1+ serial number: 506

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 5013

Secondary conductivity serial number: 3394

Transmissometer: Wetlab3 Model: C-Star s/n: 953DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 10X s/n: 3685 P S or NO pump?

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

Oxygen sensor: SBF Model: 43 s/n: 3234 P S or NO pump?

PAR sensor: Biophysical Model: QSP200145 s/n: 4565 Surface PAR? Y/N

Other sensors: PH SBF18 s/n: 0692 P, S or NO pump?

Other sensors: Altimeter s/n: 43281 P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

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

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

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

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

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

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

Rosette Setup:

Number of bottles: 24

Manufacturer: 105

Volume of bottles (litres): 10L

Winches:

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

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

Salinometer:

Make: N/A 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: N/A Version: _____

Sampling interval (seconds): _____

Fluorometer sensor serial number: _____

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

ADCP Setup:

Computer time zone: _____

Sampling interval (sec): _____

Bin Length: (2^x): _____

Pulse Length: _____

Buffer (bytes): _____

Gyro Offset: _____

User Exits: Name: _____ Exit points: _____

Name: _____ Exit points: _____

Name: _____ Exit points: _____

Work File: _____

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 Things looked good C 10 m,

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 <i>NOV</i>				Year <i>2018</i>			Vessel <i>VECTOR</i>			Cruise ID <i>2018-032</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
1	51	22	02:53	BE	ROS	US	48°39.072	123°29.987	181		1 - 9		PC	☒	test cast
			02:56	BO			°39.071	°29.982		100	-			☐	bot 10-24 snapped
			03:07	EN			°39.062	°29.972			-			☐	for testing.
2	58	22	05:14	BE	ROS		48°42.974	123°14.483	335 → 315		-		PC	☒	problem with
			05:21	BO			°43.026	°14.731		320	-			☐	computer cable
			05:27	EN			°43.181	°14.981			-			☐	fixed by switch
3	59	22	06:04	BE	NET		48°37.835	123°14.518	236		-		HR	☐	launch up @
			07:01	BO			°37.892	°14.454		226	-			☐	0.7 m/s
			07:06	EN			°37.900	°14.344			-			☐	2306 @ sk
4	59	22	07:31	BE	ROS	US	48°37.868	123°14.417	239		10 - 23	14	PC	☒	not enough water
			07:35	BO			°37.873	°14.430		237	-			☐	in bottle 14
			07:52	EN			°38.021	°14.449			-			☐	
5	60	22	08:37	BE	ROS		48°33.888	123°12.869	295		-		PC	☒	
			08:46	BO			°33.905	°12.917		295	-			☐	
			08:53	EN			°33.979	°13.804			-			☐	
6	61	22	09:36	BE	ROS		48°29.251	123°09.244	276		-		PC	☒	
			09:42	BO			°29.306	°09.317		281	-			☐	
			09:47	EN			°29.364	°09.430			-			☐	
			:				°	°			-			☐	

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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DE = Deployment Time
 MR = Messenger Release Time
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Produced by the Water Properties Group, IOS

WaterProperties.ca
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WiFi
Water Properties - Vector 10.249.56.236 server

Flu $\approx$ 10-11 mg/L 137 ctd

WiFi

colbeer

ctd

VNC

Science

— depart Port Bay @ 1810 (local) 0210 UTC - light rain, no wind
to another cable

- chains interfering with altimeter - re-link chains to see if alternate setup will avoid int $\bar{L}$ altimeter beam

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Month			Year			Vessel			Cruise ID						
NOVEMBER			2018			VECTOR			2018-032						
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
13	73	23	02:05	BE	ROS	—	42° 15.006	124° 06.763	159		-	—	PC	☒	
			02:08	BO			° 15.014	° 06.788		152	-			☐	
			02:11	EN			° 15.035	° 06.829			-			☐	
14	72	23	02:42	BE	NET		42° 18.666	124° 04.170	187		-	—	HR	☐	18:42
			02:49	BO			° 18.838	° 04.364		177	-			☐	up @ 1m/s
			02:52	EN			° 18.934	° 04.472			-			☐	
15	72	23	03:24	BE	ROS	US	42° 18.674	124° 04.271	185		52-65	14		☒	
			03:28	BO			° 18.748	° 04.397		182	-			☐	
			03:40	EN			° 18.997	° 04.801			-			☐	
16	71	23	04:24	BE	ROS	—	42° 22.261	123° 59.658	108		-	—	PC	☒	
			04:27	BO			° 22.266	° 59.744		106	-			☐	
			04:29	EN			° 22.268	° 59.819			-			☐	
17	70	23	06:16	BE	ROS	—	42° 19.102	123° 42.988	156		-	—	PC	☒	
			06:19	BO			° 19.055	° 42.908		153	-			☐	
			06:22	EN			° 19.021	° 42.839			-			☐	
18	69	23	07:15	BE	ROS	US	42° 15.725	123° 43.428	179		66-77	12	PC	☐	
			07:18	BO			° 15.787	° 43.477		177	-			☐	
			07:30	EN			° 15.966	° 43.592			-			☐	
			:				° .	° .			-			☐	

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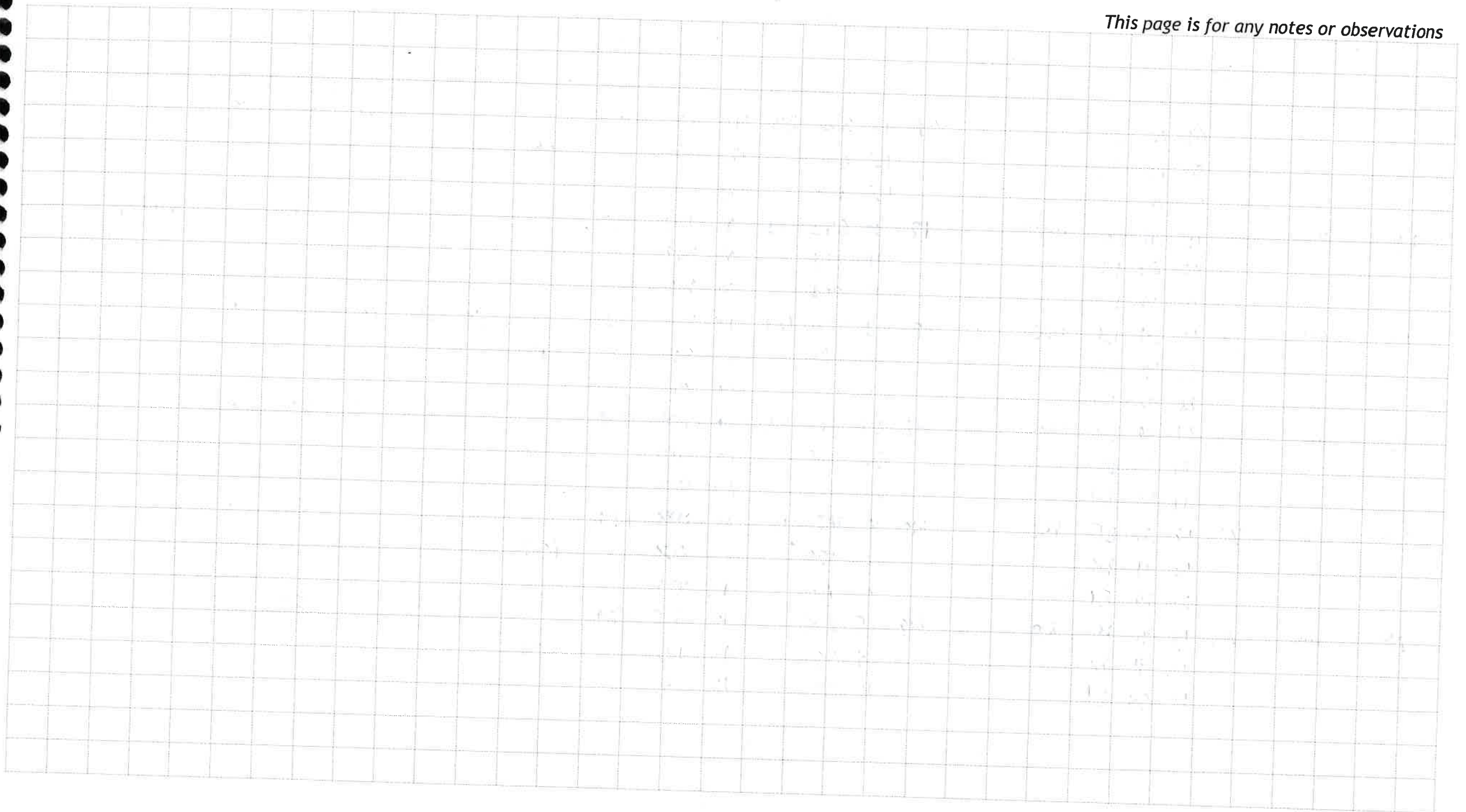
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Notes:

This page is for any notes or observations



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Month				Year		Vessel		Cruise ID							
NOVEMBER				2018		VECTOR		2018-032							
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
19	68	23	08:10	BE	ROS	/	48° 12.250	123° 43.044	143		/	/	SR	☒ ☐	
			08:13	BO			° 12.283	° 43.044		139	-			☐ ☐	
			08:16	EN			° 12.314	° 43.073			-			☐ ☐	
20	105	23	10:01	BE	ROS	/	48° 11.042	123° 18.901	92		/	/	SR	☒ ☐	Deck pressure
			10:03	BO			° 11.044	° 18.878		87	-			☐ ☐	is ~ 1.10
			10:05	EN			° 11.048	° 18.842			-			☐ ☐	service →
21	ADCP	23	10:38	BE	ROS	US	48° 13.997	123° 17.945	122		78-88	11	SR	☒ ☐	
			10:41	BO			° 14.004	° 17.909		119	-			☐ ☐	
			10:52	EN			° 14.027	° 17.780			-			☐ ☐	
22	104	23	11:35	BE	ROS	/	48° 20.009	123° 17.938	87		/	/	SR	☒ ☐	
			11:37	BO			° 20.015	° 17.916		82	-			☐ ☐	
			11:38	EN			° 20.027	° 17.904			-			☐ ☐	
23	67	23	12:08	BE	ROS	/	48° 22.770	123° 18.038	111		/	/	SR	☒ ☐	
			12:11	BO			° 22.754	° 18.030		107	-			☐ ☐	
			12:14	EN			° 22.724	° 17.995			-			☐ ☐	
24	66	23	12:46	BE	ROS	/	48° 19.298	123° 14.120	104		/	/	SR	☒ ☐	
			12:49	BO			° 19.290	° 14.131		100	-			☐ ☐	
			12:51	EN			° 19.289	° 14.136			-			☐ ☐	
			:	:			°	°			-			☐ ☐	

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I cleaned and reseated the primary anal cable + connectors. SR

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Month <i>November</i>			Year <i>2018</i>			Vessel <i>Vector</i>			Cruise ID <i>2018-032</i>						
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
25	65	23	13:26	BE	ROS	US	48°15.930	123° 9.880			89-98	10	SR	☒	
			13:30	BO			°15.936	° 9.944			-			☐	
			13:41	EN			°15.905	°18.127			-			☐	
26	64	23	14:36	BE	ROS		48°12.820	123° 5.826	111		-		SR	☒	
			14:38	BO			°12.824	° 5.810		107	-			☐	
			14:40	EN			°12.828	° 5.795			-			☐	
27	63	23	15:28	BE	NET		48°14.570	122°58.463	154		-		ch/cc	☐	
			15:32	BO			°14.582	°58.456		144	-			☐	
			15:35	EN			°14.586	°58.432			-			☐	
28	63	23	15:49	BE	ROS	US	48°14.591	122°58.400	154		99-110	12	SR	☐	
			15:53	BO			°14.566	°58.414		150	-			☐	
			16:05	EN			°14.479	°58.444			-			☐	
29	62	23	17:25	BE	ROS	US	48°22.808	123° 2.683	152		111-121			☐	
			17:28	BO			°22.813	° 2.728		147	-			☐	
			17:40	EN			°22.951	° 2.941			-			☐	
30	54	23	19:54	BE	ROS		48°26.592	122°44.335	81		-		SR	☒	
			19:56	BO			°26.623	°44.370		77	-			☐	
			19:57	EN			°26.630	°44.383			-			☐	
			:				°	°			-			☐	

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Month <i>NOVEMBER</i>				Year <i>2018</i>		Vessel <i>NECTOR</i>				Cruise ID <i>2018-032</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
31	53	23	21:21	BE	ROS	/	48° 33.114	122° 44.970	62		-	/	R	☒ ☐	
			21:22	BO			° 33.108	° 44.971		58	-			☐ ☐	
			21:23	EN			° 33.107	° 44.971			-			☐ ☐	
32	52	23	22:13	BE	ROS	/	48° 38.896	122° 43.453	99		-	/	R	☒ ☐	
			22:15	BO			° 38.899	° 43.488		95	-			☐ ☐	
			22:17	EN			° 38.911	° 43.506			-			☐ ☐	
33	51	23	23:31	BE	ROS	/	48° 46.715	122° 51.635	165		-	/	R	☒ ☐	
			23:34	BO			° 46.711	° 51.642		161	-			☐ ☐	
			23:37	EN			° 46.702	° 51.653			-			☐ ☐	
34	57	24	01:02	BE	ROS	/	48° 44.152	123° 08.017	146		-	/	R	☒ ☐	slightly off station
			01:05	BO			° 44.155	° 08.092		145	-			☐ ☐	
			01:08	EN			° 44.152	° 08.114			-			☐ ☐	
35	56	24	01:54	BE	ROS	US	48° 46.224	123° 01.850	214 → 234		122-135	14	R	☐ ☐	
			01:59	BO			° 46.085	° 01.986		225	-			☐ ☐	
			02:12	EN			° 45.756	° 02.297			-			☐ ☐	
36	47	24	03:33	BE	ROS	/	48° 49.253	123° 06.167	182		-	/	R	☐ ☐	
			03:37	BO			° 49.217	° 06.108		177	-			☐ ☐	
			03:40	EN			° 49.189	° 06.025			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Suspend program for boat/safety exercise 12:50-13:20

2/10 = 2 cables
mm
40 mm
1 mm = 1.852 km
= 1852 m
1 cable = 185 m = 4.6 fathoms ship length
2 cable = 370 m

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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
37	48	24	04:36	BE	ROS	—	48° 51.646	123° 03.174	216		-	—	RE	☒ ☐	
			04:40	BO			° 51.598	° 03.070		200	-			☐ ☐	
			04:44	EN			° 51.548	° 02.970			-			☐ ☐	
38	49	24	05:19	BE	ROS	—	48° 54.958	122° 59.525	132		-	—	RE	☒ ☐	
			05:22	BO			° 54.932	° 59.465		127	-			☐ ☐	
			05:24	EN			° 54.910	° 59.416			-			☐ ☐	
39	44	24	06:12	BE	ROS	—	48° 56.755	123° 05.959	119		-	—	RE	☒ ☐	
			06:15	BO			° 56.755	° 05.968		115	-			☐ ☐	
			06:17	EN			° 56.755	° 05.960			-			☐ ☐	
40	45	24	07:12	BE	ROS	—	48° 53.845	123° 08.494	122		-	—	RE	☒ ☐	
			07:14	BO			° 53.834	° 08.504		123	-			☐ ☐	
			07:17	EN			° 53.820	° 08.537			-			☐ ☐	
41	46	24	07:49	BE	NET		48° 51.396	123° 10.799	174		-	—	RE	☐ ☐	
			07:54	BO			° 51.390	° 10.827		164	-			☐ ☐	
			07:57	EN			° 51.402	° 10.822			-			☐ ☐	
42	46	24	08:13	BE	ROS		48° 51.430	123° 10.829	176		-		SR	☒ ☐	
			08:18	BO			° 51.451	° 10.802		172	-			☐ ☐	
			08:31	EN			° 51.499	° 10.837			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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skip station 50

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43	107	24	09:34	BE	ROS		48°58.391	123°18.064	183				SR	☒	
			09:38	BO			°58.410	°18.201		178	-			☐	
			09:42	EN			°58.435	°18.353			-			☐	
44	43		10:36	BE	ROS		49°0.161	123°30.145	190		-		SR	☒	
			10:39	BO			°0.141	°30.134		185	-			☐	
			10:43	EN			°0.134	°30.116			-			☐	
45	42		11:09	BE	NET		49°01.772	123°26.114	317		-		CW/CC	☐	
			11:19	BO			°01.783	°26.119		307	-			☐	
			11:24	EN			°01.784	°26.109			-			☐	
46	42		11:36	BE	ROS	US	49°01.777	123°26.108	321		148-164		SR	☒	
			11:44	BO			°01.775	°26.125		316	-			☐	
			12:04	EN			°01.757	°26.159			-			☐	
47	41		12:43	BE	ROS		49°03.305	123°22.290	246				SR	☒	
			12:48	BO			°03.298	°22.274		241	-			☐	
			12:52	EN			°03.293	°22.273			-			☐	
48	41		12:55	BE	NET		49°03.291	123°22.263	240		-		CW/CC	☐	
			13:04	BO			°03.310	°22.284		230	-			☐	
			13:07	EN			°03.323	°22.290			-			☐	
			:				°	°			-			☐	

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Bottle Firing Method:

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Notes:

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skip station 106

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>November</u>			Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-032</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
49	108	24	13:35	BE	ROS	/	49°04.400	123°19.109	94		-	/	SR	☒	
			13:37	BO			°04.394	°19.100		90	-			☐	
			13:39	EN			°04.397	°19.104			-			☐	
50	37	24	14:46	BE	ROS	/	49°13.583	123°20.670	216		-		SR	☒	
			14:50	BO			°13.594	°20.676		211	-			☐	
			14:54	EN			°13.606	°20.677			-			☐	
51	38	24	15:23	BE	NET	/	49°11.999	123°26.377	310		-	/	CW/CC	☐	
			15:33	BO			°11.974	°26.297		300	-			☐	
			15:38	EN			°11.963	°26.277			-			☐	
52	38	24	15:52	BE	ROS	/	49°11.959	123°26.278	306		-		SR	☒	
			15:58	BO			°11.951	°26.291		301	-			☐	
			16:04	EN			°11.934	°26.309			-			☐	
53	39	24	16:43	BE	ROS	/	49°09.822	123°32.917	378		165-181		SR	☒	
			16:50	BO			°09.784	°32.854		373	-			☐	
			17:13	EN			°10.030	°32.639			-			☐	
54	40	24	17:41	BE	ROS	/	49°08.621	123°36.811	151		-	/	SR	☒	
			17:46	BO			°08.606	°36.766		146	-			☐	
			17:49	EN			°08.566	°36.780			-			☐	
			:				°	°			-			☐	

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This page is for any notes or observations

drop net 40 for program due to lack of time
" old 265 & 275 " " "

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>NOVEMBER</u>			Year <u>2018</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2018-032</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
55	GEO1	24	16:54	BE	NET		49°15.003	123°44.921	450		-		ew/cc	☐ ☐	
			19:07	BO			°14.985	°44.873		390	-			☐ ☐	
			19:14	EN			°14.977	°44.853			-			☐ ☐	
56	GEO1	24	19:19	BE	NET		49°14.969	123°44.831			-		ew/cc	☐ ☐	
			19:31	BO			°14.966	°44.762			-			☐ ☐	
			19:40	EN			°14.972	°44.789			-			☐ ☐	
57	GEO1	24	19:56	BE	ROS	US	49°14.970	123°44.855	400		182-184	3	SR/PC	☒ ☐	
			20:04	BO			°14.970	°44.833		398	-			☐ ☐	
			20:15	EN			°14.924	°44.716			-			☐ ☐	
58	26	24	20:58	BE	ROS	/	49°14.227	123°50.556	255		-	/	R	☒ ☐	
			21:03	BO			°14.184	°50.474		255	-			☐ ☐	
			21:08	EN			°14.138	°50.408			-			☐ ☐	
59	27	24	21:52	BE	ROS	US	49°19.064	123°47.954	345		185-201	17	R	☒ ☐	
			21:59	BO			°19.064	°47.954		343	-			☐ ☐	
			22:16	EN			°19.105	°47.879			-			☐ ☐	
60	28	24	23:02	BE	ROS	/	49°24.107	123°45.380	135		-		R	☒ ☐	
			23:04	BO			°24.120	°45.398		132	-			☐ ☐	
			23:07	EN			°24.132	°45.408			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Notes:

$$x + x \times 2x = 3x$$

$$x + x \times 1.5 = (2.5)x$$

This page is for any notes or observations

skip stations 265 and 275

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page ____ of ____

Month				Year			Vessel			Cruise ID					
NOVEMBER				2018			VECTOR			2018-032					
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
61	28	24	23:13	BE	NET	—	49°24.111	123°45.327	135		-	—	NR	☐ ☐	18:15 local time
			23:18	BO			°24.113	°45.339		125	-			☐ ☐	humpbacks breaching
			23:20	EN			° .113	° .331			-			☐ ☐	
62	24	25	00:58	BE	NET	—	49°30.281	124°06.063	426→431		-	—	NR	☐ ☐	
			01:11	BO			°30.297	°05.999		415	-			☐ ☐	
			01:17	EN			°30.294	°05.946			-			☐ ☐	
63	24	25	01:30	BE	ROS	US	49°30.296	124°05.892	425		202-204	3	PC	☒ ☐	
			01:38	BO			°30.280	°05.800		421	-			☐ ☐	
			01:48	EN			°30.245	°05.657			-			☐ ☐	
64	25	25	02:14	BE	ROS	—	49°27.728	124°07.523	286		-	—	PC	☒ ☐	
			02:20	BO			°27.690	°07.466		288	-			☐ ☐	
			02:25	EN			°27.648	°07.400			-			☐ ☐	
65	2	25	03:05	BE	ROS	US	49°24.132	124°09.102	280		205-220	16	PC	☒ ☐	
			03:10	BO			°24.163	°09.012		282	-			☐ ☐	
			03:26	EN			°24.202	°08.683			-			☐ ☐	
66	CPF1	25	04:25	BE	ROS	US	49°22.187	124°04.948	245		221-223	3	PC	☒ ☐	
			04:30	BO			°22.268	°04.835			-			☐ ☐	
			04:37	EN			°22.436	°04.728			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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occasional loss of keyboard function when switching between monitors

— 4.5

— 5

status
pot 4.5

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>NOVEMBER</u>			Year <u>2018</u>			Vessel <u>VECTOR</u>			Cruise ID						
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
67	CPF1	25	04:52	BE	NET		49°22.020	124°05.104	244		-	✓	HR	☐ ☐	2042 local time
			05:00	BO			°21.976	°04.981		234	-			☐ ☐	
			05:06	EN			°21.950	°04.908			-			☐ ☐	
68	4	25	06:43	BE	ROS	✓	49°24.538	124°21.730	347		-	✓	R	☐ ☐	
			06:50	BO			°24.510	°21.527		344	-			☐ ☐	
			06:57	EN			°24.492	°21.337			-			☐ ☐	
69	3	25	07:36	BE	ROS	US	49°26.636	124°20.414	321		224-239		PC	☐ ☐	
			07:42	BO			°26.642	°20.347		317	-			☐ ☐	
			08:00	EN			°26.618	°20.062			-			☐ ☐	
70	5	25	08:49	BE	ROS	✓	49°28.040	124°30.056	325		-	✓	SR	☒ ☐	
			08:56	BO			°28.034	°29.917		320	-			☐ ☐	
			09:02	EN			°28.036	°29.790			-			☐ ☐	
71	5	25	09:10	BE	NET		49°28.060	124°29.702	322		-	✓	CW/CC	☐ ☐	
			09:20	BO			°28.086	°29.502		312	-			☐ ☐	
			09:25	EN			°28.116	°29.358			-			☐ ☐	
72	6	25	09:51	BE	ROS	US	49°30.568	124°28.122	191		240-252	13	SR	☒ ☐	
			09:55	BO			°30.595	°28.066		186	-			☐ ☐	
			10:12	EN			°30.661	°27.739			-			☐ ☐	
			:				°	°			-			☐ ☐	

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skip station 1

Sounder does readout of bottom ^{depth} - stuck on surface layer - need to set operation
inactive + then normal

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page ____ of ____

Month November				Year 2018			Vessel Vector				Cruise ID 2018-032				
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
73	7	25	10:46	BE	ROS	/	49° 34.398	124° 24.251	351		/	/	SR	☐ ☐	
			10:53	BO			° 34.434	° 24.175		347	-			☐ ☐	
			11:00	EN			° 34.460	° 24.089			-			☐ ☐	
74	8	25	11:51	BE	ROS	/	49° 39.353	124° 33.012	340		/	/	SR	☒ ☐	
			11:58	BO			° 39.384	° 32.880		335	-			☐ ☐	
			12:05	EN			° 39.410	° 32.777			-			☐ ☐	
75	9	25	12:46	BE	ROS	US	49° 35.486	124° 38.534	169		253-264	12	SR	☒ ☐	
			12:50	BO			° 35.468	° 38.472		164	-			☐ ☐	
			13:03	EN			° 35.425	° 38.360			-			☐ ☐	
76	10	25	14:34	BE	ROS	/	49° 40.746	124° 47.255	106		/	/	SR	☒ ☐	
			14:36	BO			° 40.744	° 47.257		102	-			☐ ☐	
			14:38	EN			° 40.744	° 47.252			-			☐ ☐	
77	11	25	15:05	BE	NET	/	49° 42.369	124° 43.388	300		/	/	CW/CC	☐ ☐	
			15:15	BO			° 42.359	° 43.349		290	-			☐ ☐	
			15:21	EN			° 42.347	° 43.320			-			☐ ☐	
78	11		15:29	BE	ROS	/	49° 42.343	124° 43.298			-			☐ ☐	Tripped bot1 by accident
			15:36	BO			° 42.316	° 43.258		298	-			☐ ☐	
			:	EN			° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>NOVEMBER</u>				Year <u>2018</u>			Vessel <u>Vector</u>			Cruise ID <u>2018-032</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
79	12	25	16:04	BE	ROS	US	49° 43.615	124° 40.925	358		-		8R2	☒	
			16:09	BO			° 43.576	° 40.840		353	-			☐	
			16:34	EN			° 43.559	° 40.690			-			☐	
80	14	25	18:13	BE	NET		49° 52.987	124° 59.632	315		-		cw/cc	☐	
			18:23	BO			° 52.988	° 59.580		305	-			☐	
			18:28	EN			° 52.981	° 59.562			-			☐	
81	14	25	18:32	BE	NET		49° 52.997	124° 59.548	315				cw/cc	☐	
			18:43	BO			° 52.944	° 59.475		305	-			☐	
			18:48	EN			° 52.948	° 59.437			-			☐	
82	14	25	18:55	BE	ROS	US	49° 52.933	124° 59.401			282-297			☐	
			19:02	BO			° 52.930	° 59.376		312	-			☐	
			19:23	EN			° 52.892	° 59.341			-			☐	
83	16	25	20:23	BE	ROS	US	49° 57.760	125° 08.588	155		298-308	11	R	☒	
			20:26	BO			° 57.788	° 08.564		147	-			☐	
			20:35	EN			° 57.838	° 08.426			-			☐	
84	22	26	01:31	BE	ROS	US	49° 40.312	124° 16.303	354		-	3	R	☒	15 min to settle
			01:38	BO			° 40.262	° 16.372		355	-			☐	on atm
			01:47	EN			° 40.201	° 16.298			-			☐	
			:				°	°			-			☐	

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Month				Year		Vessel		Cruise ID							
NOVEMBER				2018		VECTOR		2018-032							
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
85	22	26	01:58	BE	NET	—	49°40.165	124°16.286	352		-	—	HR	☐ ☐	
			02:10	BO			°40.113	°16.222		342	-			☐ ☐	
			02:16	EN			°40.110	°16.201			-			☐ ☐	
86	22	26	02:23	BE	NET	—	49°40.082	124°16.186	350		-	—	HR	☐ ☐	
			02:34	BO			°40.055	°16.103		340	-			☐ ☐	
			02:40	EN			°40.039	°16.051			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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