

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2020-007

DATE:

From: 16 March 2020

To:

VESSEL:

CCGS Neocaligus

PROJECT(S):

SOG zooplankton

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

WaterProperties.ca

Captain: ASAD: POSTEN ^{COOK:} First Officer: YOUNG
Second Officer: JAMES Third Officer: _____
Fishing Master: _____ Chief Engineer: COLE / COOPER

Mission Participants / Agencies:

MARK SEATON

**** Chief Scientist to tape Scientific Personnel section of their cruise plan here ****

This is accessed from your WaterProperties.ca Dashboard or from here:

<https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=YYYYY-NNN>

**** 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: _____

Data acquisition program: Seaterm

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

Primary CTD

Make: SBE model: 25 serial number: 456

Primary temperature serial number: 5130

Primary conductivity serial number: 3500

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ serial: _____

Transmissometer: _____ Model: _____ serial: _____

Fluorometer: Model Wetlab Eco Cable gain: 25 serial: 4185 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 serial: 3234 P, S or NO pump?

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

Other sensors: Pressure SBE 29 serial: 0573 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?

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).

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of 1

Month			Year			Vessel			Cruise ID						Page 1 of	
MARCH			2020			NEOCALIGUL			2020-0017						1	
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	
1	CG01	16	19:21	BC	CTD		49° 14.987	123° 45.377	407		-		MB	☒		
			:28	BO	BOT	MSG	° 14.961	° 45.336		357	1 -	1		☐	DEEP SENSITIVITY	
			:37	EN			° 14.915	° 45.293			-			☐		
2	CG01	16	19:38	BC	BOT	MSG	49° 14.914	123° 45.295	407	Ø	2 -	1	MB	☐		
3	CG01	16	19:43	BC	NET		49° 15.006	123° 45.407	407		-	-	MB	☐		
			19:55	BO			° 14.958	° 45.318		397	-			☐		
			20:01	EN			° 14.921	° 45.298			-			☐		
4	2	16	22:31	BC	CTD	-	49° 24.121	124° 09.307	278		-	-	MB	☒		
			22:37	BO			49° 24.083	124° 09.283		268	-			☐		
			22:42	EN			49° 24.053	124° 09.261			-			☐		
5	2	16	22:43	BC	BOT	MSG	49° 24.042	124° 09.249	278	Ø	3 -	1	MB	☐		
6	3	16	23:37	BC	CTD	-	49° 26.581	124° 20.171	321	311	-	-	MB	☒		
			23:43	BO			° 26.559	° 20.103		311	-			☐		
			23:49	EN			° 26.553	° 20.067			-			☐		
7	3	16	23:53	BC	BOT	MSG	49° 26.555	124° 20.111	321	Ø	4 -	1	MB	☐		
8	BS-11	17	14:14	BC	CTD		49° 28.995	124° 46.000	60		-	-	MB	☒	DAY 2	
			14:15	BO			° 28.992	° 45.997		50	-			☐		
			14:16	EN			° 28.990	° 45.995			-			☐		
9	BS-11	17	14:17	BC	BOT	MSG	49° 28.972	124° 45.985	60	Ø	5 -	1	MB	☐		
Event Type: LOOP = Sea Water Loop BOT = Bottle cast (no CTD) Bottle Firing Method: Time Code: CTD Transmissometer and FI																

Event Type:

BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

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

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

START 2020-007 BEAUTIFUL CLEAR DAY.

~ 56" FROM CTD TO BOTTOM OF ^{DEEP} SAL BOTTLE

NEW WINCH OPERATOR; DELAY @ SRF (> 2 min SOAK), STARTED SLOWER THAN 1 m/sec FOR FIRST ~150-200m

FINISHED DAY 1: ANCHOR IN BATHES SOUND / DEEP BAY

START DAY 2: ☁ OVER-CAST, CALM.

DAILY SCIENCE LOG

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Month <u>MARCH</u>			Year <u>2020</u>			Vessel <u>NEOCALTEUS</u>			Cruise ID <u>2020-007</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							
10	BS-11	17	14:24	BE	NET	-	49° 29.064	124° 45.991	60		-	-	MB	☐	
			14:25	BO			° 29.006	° 45.986		50	-	-		☐	
			14:27	EW			° 29.005	° 45.979			-	-		☐	
11	CPF2	17	15:36	BE	CTD	-	49° 27.966	124° 29.967	329		-	-	MB	☒	
			15:42	BO			° 27.946	° 29.935		319	-	-		☐	
			15:47	EW			° 27.911	° 29.900			-	-		☐	
12	CPF2	17	15:51	BE	NET	-	49° 28.037	124° 29.985	329		-	-	MB	☐	
			16:03	BO			° 27.977	° 29.921		319	-	-		☐	
			16:10	EW			° 27.871	° 29.911			-	-		☐	
13	6	17	16:33	BE	CTD	-	49° 30.611	124° 27.800	193		-	-	MB	☐	
			16:36	BO			° 30.598	° 27.765		183	-	-		☐	
		17	16:40	EW			° 30.567	° 27.710			-	-		☐	
14	6		16:41	BE	BOT	MSG	49° 30.506	124° 27.789			6-	1	MB	☐	
15	9	17	17:40	BE	CTD	-	49° 35.497	124° 38.302	170		-	-	MB	☒	
			17:43	BO			° 35.488	° 38.281		160	-	-		☐	
			17:46	EW			° 35.468	° 38.245			-	-		☐	
16	9	17	17:47	BE	BOT	MSG	49° 35.463	124° 38.235	170	✓	7-	1	MB	☐	
			:				°	°			-	-		☐	
			:				°	°			-	-		☐	

Event Type:

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

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Vessel			Cruise ID						
MARCH			2020			NEOCALIGUS			2020-007						
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
17	11	17	18:42	BC	CTD	-	49° 42.433	124° 43.462	303		-	-	MB	☒ ☐	
			18:47	BO			° 42.389	° 43.442		293	-			☐ ☐	
			18:52	EW			° 42.350	° 43.417			-			☐ ☐	
18	11	17	18:56	BC	NET	-	49° 42.434	124° 43.475	303		-	-	MB	☐ ☐	
			19:07	BO			° 42.387	° 43.430		293	-			☐ ☐	
			19:11	EW			° 42.356	° 43.408			-			☐ ☐	
19	12	17	19:30	BC	CTD/BOT		49° 43.607	124° 40.785	357		-	-	MB	☒ ☐	
			19:37	BO		MSG	° 43.582	° 40.778		347	8-	1		☐ ☐	DEP SAL
			19:44	EW			° 43.550	° 40.770			-			☐ ☐	
20	12	17	19:46	BC	BOT	MSG	49° 43.540	124° 40.769			9-	1-	MB	☐ ☐	
21	12	17	19:50	BC	NET	-	49° 43.631	124° 40.792	354		-	-	MB	☐ ☐	
			20:01	BO			° 43.606	° 40.777		347	-			☐ ☐	
			20:08	EW			° 43.626	° 40.811			-			☐ ☐	
22	20	17	21:08	BC	CTD	-	49° 47.187	124° 32.287	377		-	-	MB	☒ ☐	
			21:13	BO			° 47.161	° 32.251		367	-			☐ ☐	
			21:19	EW			° 47.136	° 32.210			-			☐ ☐	
23	22	17	22:36	BC	CTD/		49° 40.213	124° 16.293	354		-			☒ ☐	
			22:42	BO	BOT	MSG	° 40.195	° 16.222		344	10-	1	MB	☐ ☐	
			22:50	EW			° 40.171	° 16.201			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)

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ROS = CTD in Rosette

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

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Notes: _____

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DAILY SCIENCE LOG

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Month <u>MARCH</u>				Year <u>2020</u>			Vessel <u>NOGALFUS</u>			Cruise ID <u>2020-007</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							
24	22	17	22:54	BE	BOT	MSG	49° 40.211	124° 16.307	354	Ø	11	1	MB	☐ ☐	
25	22	17	22:59	BE	NET	-	49° 40.198	124° 16.245	354	3	-	-	MB	☐ ☐	
			22:08	BO			° 40.197	° 16.217		344	-			☐ ☐	
			23:14	EW			° 40.198	° 16.171			-			☐ ☐	
26	IS-2	18	00:05	BE	CTD	-	49° 38.174	124° 5.012	26		-	-	MB	☒ ☐	
			00:05	BO			° 38.174	° 5.012		16	-			☐ ☐	
			00:06	EW			° 38.167	° 5.043			-			☐ ☐	
27	IS-2	18	00:08	BE	NET	-	49° 38.164	124° 5.050	26		-	-	MB	☐ ☐	
			00:08	BO			° 38.164	° 5.050		16	-			☐ ☐	
			00:09	EW			° 38.160	° 5.051			-			☐ ☐	
28	24	18	00:59	BE	CTD	-	49° 30.300	124° 6.000	426		-	-	MB	☒ ☐	
			01:07	BO			° 30.242	° 5.949		416	-			☐ ☐	
			01:14	EW			° 30.186	° 5.922			-			☐ ☐	
29	24	18	01:17	BE	NET	-	49° 30.200	124° 5.950	426		-	-	MB	☐ ☐	
			01:32	BO			° 30.211	° 5.973		416	-			☐ ☐	
			01:39	EW			° 30.231	° 5.991			-			☐ ☐	
30	CPE1	18	15:03	BE	CTD	-	49° 21.996	124° 4.972	246		-	-	MB	☒ ☐	
			15:07	BO			° 21.983	° 4.930		236	-			☐ ☐	
			15:11	EW			° 21.983	° 4.885			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop

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DRF = Drifter

=

Bottle Firing Method:

US = Up / Stop (default)

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Notes:

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EN = End Time of Cast

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

DE = Deployment Time

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RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

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FINISH DAY 2 ANCHOR SOUTH END OF LESQUET ISLAND

START DAY 3 BEAUTIFUL CLEAR MORNING; CRESCENT MOON RISING, HERBING JUMPING AROUND SHIP.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month <i>MARCH</i>			Year <i>2020</i>			Vessel <i>NEOCALIFUS</i>			Cruise ID <i>2020-007</i>						
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							
31	CPF1	18	15:15	BC	NET	-	49° 22.000	124° 5.008	246		-	-	MB	☐ ☐	
			15:23	BO			° 21.990	° 4.924		236	-			☐ ☐	
			15:28	CU			° 21.994	° 4.907			-			☐ ☐	
32	27	18	16:43	BC	CTD		49° 19.092	123° 47.994	348		-		MB	☒ ☐	
			16:49	BO			° 19.081	° 47.961		338	-			☐ ☐	
			16:55	CU			° 18.902	° 47.937			-			☐ ☐	
33	27	18	16:57	BC	BOT	MSG	49° 19.079	123° 47.983	348	Ø	12 -	1	MB	☐ ☐	
34	28	18	17:37	BC	CTD		49° 24.104	123° 45.294	134		-		MB	☒ ☐	
			17:40	BO			° 24.081	° 45.275		130	-			☐ ☐	
			17:42	CU			° 24.074	° 45.270			-			☐ ☐	
35	28	18	17:43	BC	BOT	MSG	49° 24.066	123° 45.263	134	Ø	13 -	1	MB	☐ ☐	
36	28	18	17:47	BC	NET	-	49° 24.105	123° 45.331	136		-	-	MB	☐ ☐	
			17:51	BO			° 24.087	° 45.314		126	-			☐ ☐	
			17:53	CU			° 24.082	° 45.307			-			☐ ☐	
37	38	18	19:41	BC	CTD	-	49° 12.010	123° 26.398	309		-	-	MB	☒ ☐	
			19:46	BO			49° 12.014	123° 26.349		299	-			☐ ☐	
			19:51	CU			49° 12.033	123° 26.303			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

DAILY SCIENCE LOG

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Month <u>MARCH</u>			Year <u>2020</u>			Vessel <u>NEOCALIGOS</u>			Cruise ID <u>2020-007</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
38	38	18	19:53	BE	NET	-	49° 12.000	123° 26.416	309		-	-	MB	☐	
			20:04	BO			° 11.986	° 26.364		299	-	-		☐	
			20:09	EW			° 11.981	° 26.344			-	-		☐	
39	108	18	21:34	BE	CTD/BOT	MSG	49° 4.377	123° 19.126	88		-	-	MB	☒	
			21:36	BO			° 4.369	° 19.135		78	13	1		☐	
			21:38	EW			° 4.360	° 19.148			-	-		☐	
<i>[Handwritten scribbles across rows 39-41]</i>															
41	41	18	22:05	BE	CTD	-	49° 3.288	123° 22.306	244		-	-	MB	☒	
			22:09	BO			° 3.265	° 22.316		234	-	-		☐	
			22:13	EW			° 3.248	° 22.316			-	-		☐	
42	41	18	22:16	BE	NET	-	49° 3.297	123° 22.265	240		-	-	MB	☐	
			22:21	BO			° 3.268	° 22.255		230	-	-		☐	
			22:28	EW			° 3.259	° 22.246			-	-		☐	
43	39	18	23:35	BE	CTD/BOT		49° 9.805	123° 33.966	377		-	-		☒	
			23:41	BO		MSG	° 9.800	° 32.883		367	14	1	MB	☐	DEEP SAK.
			23:49	EW			° 9.780	° 32.871			-	-		☐	
44	39	18	23:54	BE	BOT		49° 9.808	123° 32.930	377	Ø	15	1	MB	☐	
			:				° .	° .			-	-		☐	
			:				° .	° .			-	-		☐	

Event Type:

BOT = Bottle cast (no CTD)
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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Notes:

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~ 1400 CALLED OFF OPERATIONS TO MOVE A VESSEL; OFF STEVENSON BREAKWATER.
→ CALLED OFF @ 1415 HEAD TO ^{SIN} 108.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>MARCH</u>			Year <u>2020</u>			Vessel <u>NEOCALIGOS</u>			Cruise ID <u>2020-007</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							
45	40	19	15:36	BC	CTD		49° 8.608	123° 36.762	147		-		MB	☒	
			:38	BO			° 8.615	° 36.784		137	-			☐	
			:40	EW			° 8.615	° 36.786			-			☐	
46	40	19	15:41	BC	NET		49° 8.615	123° 36.790	143		-		MB	☐	
			:46	BO			° 8.622	° 36.801		133	-			☐	
			:49	EW			° 8.631	° 36.821			-			☐	
47	42	19	16:56	BC	CTD/BOT		49° 1.791	123° 26.208	321		-		MB	☒	
			17:02	BO		MSG	° 1.781	° 26.249		311	16-	1		☐	DEEP SAL
			17:08	EW			° 1.780	° 26.272			-			☐	
48	42	19	17:16	BC	BOT	MSG	49° 1.785	123° 26.270	321	Ø	17-	1	MB	☐	
49	42	19	17:13	BC	NET		49° 1.810	123° 26.181	321		-		MB	☐	
			17:24	BO			° 1.826	° 26.201		311	-		MB	☐	
			17:29	EW			° 1.831	° 26.211			-			☐	
50	46	19	19:00	BC	CTD		48° 51.387	123° 10.809	180		-		MB	☒	
			19:03	BO			° 51.366	° 10.775		170	-			☐	
			19:06	EW			° 51.351	° 10.753			-			☐	
51	46	19	19:06	BC	BOT	MSG	48° 51.345	123° 10.743	180	Ø	18-	1	MB	☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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Notes:

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END OF DAY 3. DROPPED GORD OFF @ PBS & TIED UP. LOTS OF ANXIETY AMONGST
CREW RE: CORONAVIRUS
(ENGINEER)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 8 of _____

Month <u>MARCH</u>				Year <u>2020</u>			Vessel <u>NEOCALIGUS</u>			Cruise ID <u>2020-007</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
52	46	19	19:10	BE	NET	-	48° 51.412	123° 10.824	179		-	-	MB	☐	
			19:16	BO			° 51.389	° 10.790		169	-			☐	
			19:19	EN			° 51.392	° 10.795			-			☐	
53	56	19	20:16	BE	CTD	-	48° 46.403	123° 1.601	210		-		MB	☒	
			20:20	BO			° 46.436	° 1.594		200	-			☐	
			20:23	EN			° 46.463	° 1.585			-			☐	
54	56	19	20:25	BE	BOT	MSG	48° 46.488	123° 1.571			19-	1	MB	☐	
55	59	19	21:59	BE	CTD	-	48° 36.931	123° 14.930	237		-	-	MB	☒	
			22:05	BO			° 36.880	° 14.867		227	-			☐	
56	59	19	22:06	EN	BOT	MSG	48° 36.853	123° 14.845			-	-	MB	☐	
56	59	19	22:11	BE	BOT	MSG	48° 36.970	123° 14.931	237	08	20-	1	MB	☐	
57	59	19	22:14	BE	NET	-	48° 36.977	123° 14.962	235		-	-	MB	☐	
			22:22	BO			° 36.885	° 14.872		225	-			☐	
			22:25	EN			° 36.847	° 14.844			-			☐	
58	CI-01	19	23:40	BE	CTD	-	48° 45.829	123° 20.497	65		-	-	MB	☒	
			23:42	BO			° 45.817	° 20.488		55	-			☐	
			23:43	EN			° 45.812	° 20.486			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	

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

WaterProperties.ca
 Version: 17 Feb 2020

98288

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Vessel			Cruise ID						
MARCH			2020			NEOCALOCUS			2020-007						
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							
59	GI-01	19	23:43	BE	NET	-	48° 45.810	123° 21.486	65		-	-	MB	☐	
			23:45	BO			° 45.786	° 20.477		55	-	-		☐	
			23:46	EN			° 45.782	° 20.479			-	-		☐	
60	SC04	20	00:15	BE	CTD	-	48° 43.553	123° 24.997	95		-	-	MB	☐	
			00:17	BO			° 43.545	° 25.000		85	-	-		☒	
			00:18	EN			° 43.538	° 24.996			-	-		☐	
61	SC04	20	00:19	BE	BOT	MSG	48° 43.550	123° 24.993	95		-	-		☐	
62	SC04	20	00:21	BE	NET		48° 43.499	123° 24.975	93		21	1	MB	☐	
			00:24	BO			° 43.500	° 24.962		83	-	-	MB	☐	
			00:26	EN			° 43.	° 25.			-	-		☐	
63	CB/E2	20	14:52	BE	CTD	-	48° 44.216	123° 34.418	65		-	-	MB	☒	
			:53	BO			° 44.209	° 34.400		55	-	-		☐	
			:54	EN			° 44.206	° 34.385			-	-		☐	
64	CB/E2	20	14:57	BE	NET	-	48° 44.228	123° 34.419	66		-	-	MB	☐	
			:59	BO			° 44.228	° 34.419		56	-	-		☐	
			15:00	EN			° 44.225	° 34.406			-	-		☐	
			:				° .	° .			-	-		☐	
			:				° .	° .			-	-		☐	
			:				° .	° .			-	-		☐	
			:				° .	° .			-	-		☐	
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This page is for any notes or observations

END OF DAY 4, ANCHOR CON BAY

DAY 5: CBE2 SIN & IOS UNLOAD.