

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-07

trip 4: July 31 - Aug 4
2017

DATE:

From:

VESSEL:

PROJECT(S):

Salacia

Strait of Georgia Zooplankton

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

WaterProperties.ca

Captain: John Plant First Officer: _____
Second Officer: _____ Third Officer: _____
Fishing Master: _____ Chief Engineer: _____

Mission Participants / Agencies:

PSF

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

1st Leg Scientific Personnel: Chief Scientist: Kelly Young

Name	Watch	Cabin	Name	Watch	Cabin
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<u>6-10 Mar: Kelly Y</u>	<u>deck</u>		<u>Kristoff Mantta</u>		
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<u>20-24 Mar: Mark Bolton</u>	<u>deck</u>		<u>Jordan Barca</u>		
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<u>5-9 June: Tamara Fraser</u>	<u>deck</u>				
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<u>21 Jul - 4 Aug: Glenn Cooper</u>	<u>deck</u>				
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2nd Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin
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**** 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: #32

Data acquisition program: Seasave

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD Cruise #1+2 6-10 Mar, 20-24 Mar

Make: SBE-~~2~~ model: 25+ serial number: 1123

Primary temperature serial number: 4888

Primary conductivity serial number: 4513

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model ECO Cable gain: 13 s/n: 2214 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 3234 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?

Secondary CTD #3 - 5-9 June, #4 30 July - 4 Aug

Make: SBE model: 25+ serial number: 1123

Primary temperature serial number: 4888

Primary conductivity serial number: 3396

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model ECO Cable gain: 13 s/n: 2214 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 3234 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): 1.2 m (see notes)

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

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month				Year		Vessel		Cruise ID							
June / July				2017		Salacia		2017-07							
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
94	59	09	07:00	BE	CTD	-	48° 36.726	123° 14.971	225		-	-	TF	☐ ☐	owe sch
			07:04	BO			48° 36.583	123° 14.992		215	-			☐ ☐	a pkg of AA
			07:08	EN			48° 36.464	123° 14.922			-			☐ ☐	batteries problem & data?
95	59	09	07:18		NET	-	48° 37.178	123° 15.634	225		-	-	TF	☐ ☐	
			07:25				48° 36.981	123° 15.041		215	-			☐ ☐	
			07:30				48° 36.884	123° 15.019			-			☐ ☐	
~~~~~															
96	CB22	July 31	17:11	BE	CTD	-	48° 44.18	123° 34.47	65		-		GC	<input type="checkbox"/> <input type="checkbox"/>	All times UTC
			17:13	BO			48° 44.16	123° 34.46		55	-			<input type="checkbox"/> <input type="checkbox"/>	
			17:15	EN			48° 44.16	123° 34.43			-			<input type="checkbox"/> <input type="checkbox"/>	
97	CB22	31	17:19	BE	NET		48° 44.14	123° 34.40	65		-			<input type="checkbox"/> <input type="checkbox"/>	
			17:21	BO			48° 44.13	123° 34.38		55	-			<input type="checkbox"/> <input type="checkbox"/>	
			17:22	EN			48° 44.12	123° 34.38			-			<input type="checkbox"/> <input type="checkbox"/>	
98	SC04	31	18:18	BE	NET		48° 43.47	123° 25.02	90		-			<input type="checkbox"/> <input type="checkbox"/>	Changed to heavier
			18:21	BO			48° 43.47	123° 25.63		80	-			<input type="checkbox"/> <input type="checkbox"/>	weight for nets
			18:22	EN			48° 43.47	123° 25.04			-			<input type="checkbox"/> <input type="checkbox"/>	
99	SC04	31	18:33	BE	CTD		48° 43.47	123° 24.98	90		-			<input type="checkbox"/> <input type="checkbox"/>	
			18:36	BO			48° 43.47	123° 25.00		80	38-39			<input type="checkbox"/> <input type="checkbox"/>	
			18:38	EN			48° 43.46	123° 25.00			-			<input type="checkbox"/> <input type="checkbox"/>	

## 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

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 Version: 6 December 2016

# DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

Month July / Aug Year 2017 Vessel Salacia Cruise ID 2017-07 Page 17 of     

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							
100	SC 04	31	18:45	MR	Bot	MSG	48° 43.42	123° 25.04	90	85	38 - 39	2	GC	<input type="checkbox"/> <input type="checkbox"/>	382.0m (a+b)
101	G101	31	19:29	BE	CTD	—	48° 45.86	123° 20.54	65		-			<input type="checkbox"/> <input type="checkbox"/>	
			19:30	BO			48° 45.85	123° 20.55		55	-			<input type="checkbox"/> <input type="checkbox"/>	
			19:32	EN			48° 45.85	123° 20.56			-			<input type="checkbox"/> <input type="checkbox"/>	
102	G101	31	19:35	BE	NET		48° 45.84	123° 20.57	65		-			<input type="checkbox"/> <input type="checkbox"/>	
			19:37	BO			48° 45.85	123° 20.58		55	-			<input type="checkbox"/> <input type="checkbox"/>	
			19:39	EN			48° 45.85	123° 20.58			-			<input type="checkbox"/> <input type="checkbox"/>	
103	59	31	20:42	BE	CTD		48° 36.94	123° 14.94	225		-			<input type="checkbox"/> <input type="checkbox"/>	
			20:51	BO			48° 36.94	123° 14.94		215	-			<input type="checkbox"/> <input type="checkbox"/>	
			20:55	EN			48° 36.94	123° 14.92			-			<input type="checkbox"/> <input type="checkbox"/>	
104	59	31	20:58	BE	NET		48° 36.94	123° 14.92	225		-			<input type="checkbox"/> <input type="checkbox"/>	
			21:05	BO			48° 36.93	123° 14.91		215	-			<input type="checkbox"/> <input type="checkbox"/>	
			21:08	EN			48° 36.93	123° 14.88			-			<input type="checkbox"/> <input type="checkbox"/>	
105	46	31	23:52	BE	CTD		48° 51.37	123° 10.67	176		-			<input type="checkbox"/> <input type="checkbox"/>	
			23:55	BO			48° 51.35	123° 10.64		166	-			<input type="checkbox"/> <input type="checkbox"/>	
			23:58	EN			48° 51.33	123° 10.61			-			<input type="checkbox"/> <input type="checkbox"/>	
106	46 (Aug 01)		00:05	BE	NET		48° 51.38	123° 10.79	176		-			<input type="checkbox"/> <input type="checkbox"/>	
			00:08	BO			48° 51.36	123° 10.76		166	-			<input type="checkbox"/> <input type="checkbox"/>	
			00:10	EN			48° 51.35	123° 10.72			-			<input type="checkbox"/> <input type="checkbox"/>	

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ROS =  
SET = Fish Set

Filtered 70mls/ filter Last message. I was sure it was attached. I guess I was wrong :  
phyto + chl-a samples taken. Chlorophyll samples in duplicate.

Finally had a moment to connect to the CTD to check on the data + instruments. Unable to communicate. Tried various COM ports, RS232 adapters but nothing work. Talked with Scott Rose on suggestions but still nothing work. In the past there were battery issues so swapped out a new set. Still unable to communicate. With old batteries saw pump working + Fluorometer light blinking. With new batteries confirmed that pumps continued to work + Fluorometer blinking. Old batteries looked fine. Decided to do station 46 last. Hoping that the CTD is internal logging the data. Returning to IOS to get new RS232 to USB adapter + computer. Obtained new computer + RS232-usb adapter from Scott Rose. Able to communicate with CTD + data looks good. Tied up @ IOS for the night.

# DAILY SCIENCE LOG

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Month August			Year 2017			Vessel Salween			Cruise ID 2017-07						
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
✓ 107	CPF1	1	22:09	BE	CTD		49° 21.99	124° 04.97	245				GC	<input type="checkbox"/> <input type="checkbox"/>	
			22:12	BO			49° 21.98	124° 04.93		235	-			<input type="checkbox"/> <input type="checkbox"/>	
			22:17	EN			49° 21.98	124° 04.91			-			<input type="checkbox"/> <input type="checkbox"/>	
108	CPF1	1	22:19	BE	NET		49° 21.98	124° 04.89	245		-			<input type="checkbox"/> <input type="checkbox"/>	
			22:25	BO			49° 21.97	124° 04.86		235	-			<input type="checkbox"/> <input type="checkbox"/>	
			22:30	EN			49° 21.98	124° 04.84			-			<input type="checkbox"/> <input type="checkbox"/>	
✓ 109	CPF2	2	00:30	BE	CTD		49° 27.95	124° 30.05	325		-			<input type="checkbox"/> <input type="checkbox"/>	Soil sample @
			00:35	MR		MSG	49° 27.92	124° 30.06		315	40	1		<input type="checkbox"/> <input type="checkbox"/>	313 meters (a+b)
			00:43	EN			49° 27.89	124° 30.06			-			<input type="checkbox"/> <input type="checkbox"/>	
110	CPF2	2	00:45	BE	NET		49° 27.87	124° 30.05	325		-			<input type="checkbox"/> <input type="checkbox"/>	
			00:51	BO			49° 27.82	124° 30.04		315	-			<input type="checkbox"/> <input type="checkbox"/>	
			00:55	EN			49° 27.80	124° 30.03			-			<input type="checkbox"/> <input type="checkbox"/>	
✓ 111	BS11	2	02:12	BE	CTD		49° 28.99	124° 46.05	58		-			<input type="checkbox"/> <input type="checkbox"/>	
			02:13	BO			49° 28.99	124° 46.05		48	-			<input type="checkbox"/> <input type="checkbox"/>	
			02:14	EN			49° 28.99	124° 46.05			-			<input type="checkbox"/> <input type="checkbox"/>	
112	BS11	2	02:16	BE	NET		49° 28.92	124° 46.03	58		-			<input type="checkbox"/> <input type="checkbox"/>	
			02:17	BO			49° 28.96	124° 46.02		48	-			<input type="checkbox"/> <input type="checkbox"/>	
			02:19	EN			49° 28.96	124° 46.02			-			<input type="checkbox"/> <input type="checkbox"/>	
			:				°	°			-			<input type="checkbox"/> <input type="checkbox"/>	

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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

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Month <u>August</u>				Year <u>2017</u>		Vessel <u>Salacia</u>				Cruise ID <u>2017-07</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							
✓ 113	11	2	13:54	BE	CTD		49° 42.42	124° 43.29	290		-		GC	<input type="checkbox"/>	
			13:59	BO			49° 42.40	124° 43.24		280	-			<input type="checkbox"/>	
			14:04	EN			49° 42.38	124° 43.18			-			<input type="checkbox"/>	
114	11	2	14:11	MR	Bot	MSG	49° 42.34	124° 43.11	290	5	41-42	2		<input type="checkbox"/>	*41 = 0m *42 = 5m
115	11	2	14:18	BE	NET		49° 42.43	124° 43.48	290		-			<input type="checkbox"/>	
			14:25	BO			49° 42.41	124° 43.41		280	-			<input type="checkbox"/>	
			14:32	EN			49° 42.40	124° 43.67			-			<input type="checkbox"/>	
✓ 116	22	2	20:31	BE	CTD		49° 40.16	124° 16.23	353		-			<input type="checkbox"/>	
			20:36	BO			49° 40.13	124° 16.21		343	-			<input type="checkbox"/>	
			20:43	EN			49° 40.10	124° 16.23			-			<input type="checkbox"/>	
117	22	2	20:45	BE	NET		49° 40.07	124° 16.20	353		-			<input type="checkbox"/>	
			20:53	BO			49° 40.04	124° 16.17		343	-			<input type="checkbox"/>	
			21:02	EN			49° 40.02	124° 16.20			-			<input type="checkbox"/>	
✓ 118	24	2	22:20	BE	CTD		49° 30.21	124° 05.92	425		-			<input type="checkbox"/>	
			22:26	BO		MSG	49° 30.18	124° 05.92		415	43-	1		<input type="checkbox"/>	* 413 meters Deepwater Salinity.
			22:38	EN			49° 30.10	124° 05.93			-			<input type="checkbox"/>	
119	24	2	22:45	BE	NET		49° 30.31	124° 06.03	425		-			<input type="checkbox"/>	
			22:55	BO			49° 30.27	124° 06.04		415	-			<input type="checkbox"/>	Stopped @ 275m because control module over-heated
			23:00	EN			49° 30.24	124° 06.04			-			<input type="checkbox"/>	Resumed shortly after

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phyto A + chlorophyll-a samples taken. Filtered 70mls/ sample in duplicates

* Came up to 390 then realize didn't send messenger to close window, went back down to 415 + sent messenger down, returned back to surface.

## DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>August</u>				Year <u>2017</u>		Vessel <u>Salacia</u>				Cruise ID <u>2017-07</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	Tms/FI Cleaned	Comments
							Latitude	Longitude							
✓ 120	28	3	00:45	BE	CTD		49° 24.08	123° 45.33	134		-		GC	<input type="checkbox"/> <input type="checkbox"/>	rough conditions
			00:47	BO			49° 24.08	123° 45.31		124	-			<input type="checkbox"/> <input type="checkbox"/>	~20 knt winds
			00:49	EN			49° 24.09	123° 45.29			-			<input type="checkbox"/> <input type="checkbox"/>	1 meter seas.
121	28	3	00:54	BE	NET		49° 24.10	123° 45.04	134		-			<input type="checkbox"/> <input type="checkbox"/>	Lots of smoke
			00:58	BO			49° 24.09	123° 45.24		124	-			<input type="checkbox"/> <input type="checkbox"/>	in the air
			1:00	EN			49° 24.10	123° 45.32			-			<input type="checkbox"/> <input type="checkbox"/>	
122	Halibut Bank	3	1:44	MR	Bot	MSG	49° 20.32	123° 43.50	134	5m	44-45	2		<input type="checkbox"/> <input type="checkbox"/>	*44 = O meter *45 = S meter
✓ 123	GEO1	3	14:39	BE	CTD		49° 15.00	123° 45.01	400		-			<input type="checkbox"/> <input type="checkbox"/>	
			14:44	BO			49° 14.97	123° 44.92		390	-			<input type="checkbox"/> <input type="checkbox"/>	
			14:52	EN			49° 14.95	123° 44.82			-			<input type="checkbox"/> <input type="checkbox"/>	
124	GEO1	3	15:01	MR	Bot	MSG	49° 14.89	123° 44.56	400	5m	46-47	2		<input type="checkbox"/> <input type="checkbox"/>	46 = O meter 47 = S meter
125	GEO1	3	15:08	BE	NET		49° 15.00	123° 45.00	400		-			<input type="checkbox"/> <input type="checkbox"/>	
			15:22	BO			49° 14.99	123° 44.83		390	-			<input type="checkbox"/> <input type="checkbox"/>	
			15:32	EN			49° 14.93	123° 44.71			-			<input type="checkbox"/> <input type="checkbox"/>	
✓ 126	40	4	13:20	BE	CTD		49° 8.60	123° 36.60	146		-			<input type="checkbox"/> <input type="checkbox"/>	
			13:22	BO			49° 8.58	123° 36.57		136	-			<input type="checkbox"/> <input type="checkbox"/>	
			13:24	EN			49° 8.56	122° 36.53			-			<input type="checkbox"/> <input type="checkbox"/>	
			:09				°	°			-			<input type="checkbox"/> <input type="checkbox"/>	
			:				°	°			-			<input type="checkbox"/> <input type="checkbox"/>	

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Chlorophyll samples in duplicates filtered 70mls/sample.

Chlorophyll samples in duplicate (atb), filtered 70mls/sample, 1 phyto sample.

Not as much smoke in the air.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month <u>August</u>			Year <u>2017</u>		Vessel <u>Salvin</u>			Cruise ID <u>2017-07</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/Fl Cleaned	Comments
							Latitude	Longitude							
127	40	4	13:30	BE	NET		49° 08.60	123° 36.76	146		-	-	GC	<input type="checkbox"/> <input type="checkbox"/>	
			13:34	BO			49° 08.58	123° 36.72		136	-			<input type="checkbox"/> <input type="checkbox"/>	
			13:37	EN			49° 08.57	123° 36.70			-			<input type="checkbox"/> <input type="checkbox"/>	
128	38	4	14:40	BE	CTD		49° 12.01	123° 26.27	300		-			<input type="checkbox"/> <input type="checkbox"/>	
			14:46	BO	BOT	MSG	49° 11.99	123° 26.21		295	48-	1		<input type="checkbox"/> <input type="checkbox"/>	Reop water Salinity A+B
			14:55	EN			49° 11.95	123° 26.15			-			<input type="checkbox"/> <input type="checkbox"/>	
129	38	4	15:02	BE	NET		49° 12.03	123° 26.42	300		-			<input type="checkbox"/> <input type="checkbox"/>	
			15:11	BO			49° 12.01	123° 26.37		290	-			<input type="checkbox"/> <input type="checkbox"/>	
			15:17	EN			49° 11.99	123° 26.28			-			<input type="checkbox"/> <input type="checkbox"/>	
✓ 130	41	4	16:25	BE	CTD		49° 03.21	123° 22.33	245		-			<input type="checkbox"/> <input type="checkbox"/>	Soaked for 2min 30sec
			16:30	BO			49° 03.15	123° 22.35		235	-			<input type="checkbox"/> <input type="checkbox"/>	because of wire angle difficulty
			16:34	EN			49° 03.08	123° 22.32			-			<input type="checkbox"/> <input type="checkbox"/>	
131	41	4	16:42	MR	BOT		49° 03.13	123° 22.32	245	5	49-50	2.		<input type="checkbox"/> <input type="checkbox"/>	#49 = 0m #50 = 5m
132	41	4	16:51	BE	NET		49° 03.13	123° 22.16	245		-			<input type="checkbox"/> <input type="checkbox"/>	
			17:03	BO			49° 02.96	123° 22.23		235	-			<input type="checkbox"/> <input type="checkbox"/>	Went 240 because of wire angle
			17:09	EN			49° 02.88	123° 22.28			-			<input type="checkbox"/> <input type="checkbox"/>	
			:				° .	° .			-			<input type="checkbox"/> <input type="checkbox"/>	
			:				° .	° .			-			<input type="checkbox"/> <input type="checkbox"/>	
			:				° .	° .			-			<input type="checkbox"/> <input type="checkbox"/>	

## 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: 6 December 2016

Deep water salinity sample, duplicates

Filtered 70mls/sample for chl      Phyto + chl samples taken

Went to 240m because of 5° wire angle