

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-05

DATE:

From: May 23 2017 To: June 4 2017

VESSEL:

John P Tully

PROJECT(S):

La Perouse Zooplankton Oceanography

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: Tully laptop

Data acquisition program: Seasave

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

Primary CTD

Make: SBE model: 9+ serial number: 550

Primary temperature serial number: 4054

Primary conductivity serial number: 1766

Secondary temperature serial number: 4484

Secondary conductivity serial number: 3531

Transmissometer: Wetlabs Model: C-STAR s/n: 1201DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 3X s/n: 3685 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 1119 P, S or NO pump?

PAR sensor: Bozorthical 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: _____ 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: 103
Volume of bottles (litres): 10 L

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: _____ 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 2488
Sampling interval (seconds): 30
Fluorometer sensor serial number: WS35-753P

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:

DAILY SCIENCE LOG

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Page 1 of 31

Month <u>MAY</u>				Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
1	SI05	24	15:27	BE	ROS	US	48° 39.55	123° 30.40	174		-	(24)	MR/CS	☒	24 WISKINS @ 500m
			15:32	BO			48° 39.55	123° 30.39		164	-			☐	NO WATER COLLECTED NO ROS FILE
			15:36	EN			48° 39.55	123° 30.39			-			☐	#1 BOT CAP LEAKING + #3
2	Har059	24	17:46	BE	ROS	US	48° 36.838	123° 14.684	225		1 - 3	6	CS/KY	☒	- Bottles 1-3 closed
			17:50	BO			48° 36.740	123° 14.670		215	-			☐	for integrity check
			17:54	EN			48° 36.610	123° 14.670			-			☐	Spigot #5 leaking
3	Har059	24	18:06	BE	NET	—	48° 36.670	123° 14.655	225		-	—	KY	☐	
			18:11	BO			48° 36.370	123° 14.830		215	-			☐	
			18:15	EN			48° 36.390	123° 14.910			-			☐	
4	LB01	25	04:13	BE	ROS	US	48° 40.41	124° 59.51	35		4 - 8	5	MR	☒	
			04:14	BO			48° 40.42	124° 59.51		23	-			☐	
			04:18	EN			48° 40.44	124° 59.51			-			☐	
5	LB02	25	04:49	BE	ROS	US	48° 38.92	125° 02.39	60		9 - 14	6	MR	☒	
			04:51	BO			48° 38.93	125° 02.40	58	47	-			☐	
			04:57	EN			48° 38.93	125° 02.38			-			☐	
6	LB03	25	05:27	BE	ROS	US	48° 37.29	125° 05.64	95		15 - 17	3	MR	☒	WRONG DEPTH IN
			05:30	BO			48° 37.29	125° 05.63		86	-			☐	HEADER MAYBE
			05:33	EN			48° 37.30	125° 05.62			-			☐	
			:				°	°			-			☐	

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
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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

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Notes:

P 1.5 / 31

→ After Hare 59: change config file to update PAR values. New config file has -PAR @ the end
MR.

Adjusted CTD computer time after Hare 59 was off by ~ 4 min.

DAILY SCIENCE LOG

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Page 2 of 31

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7	LB04	25	06:04	BE	ROS	US	48°35.70	125°08.68	113		18 - 24	7	MR	☒ ☐	
			06:08	BO			48°35.71	125°08.68		103	-			☐ ☐	
			06:17	EN			48°35.73	125°08.64			-			☐ ☐	
8	E1	25	07:08	BE	NET	—	48°31.720	125°03.750	118		-			☐ ☐	
			07:12	BO			48°31.730	125°03.750		108	-	—	CS	☐ ☐	
			07:15	EN			48°31.720	125°03.750			-			☐ ☐	
9	E1	25	07:22	BE	ROS	US	48°31.710	125°03.730	116		-	—	CS	☐ ☐	
			07:25	BO			48°31.720	125°03.730		106	-			☐ ☐	
			07:27	EN			48°31.720	125°03.740			-			☐ ☐	
10	LB05	25	08:21	BE	ROS	US	48°34.040	125°11.810	106		25 - 25	1	CS	☒ ☐	- Bot cap #1 leaking
			08:24	BO			48°34.050	125°11.820		94	-			☐ ☐	
			08:27	EN			48°34.070	125°11.780			-			☐ ☐	
11	LB06	25	09:01	BE	ROS	US	48°32.240	125°15.510	115		26 - 32	7	CS	☒ ☐	- Slipped bot #1 as it is leaky
			09:04	BO			48°32.260	125°15.500			-			☐ ☐	
			09:11	EN			48°32.330	125°15.450			-			☐ ☐	Bot cap on 7 leaking
12	C1	25	09:45	BE	ROS	US	48°28.990	125°15.330	151		—	—	CS	☒ ☐	
			09:48	BO			48°29.000	125°15.300		140	-			☐ ☐	
			09:51	EN			48°29.010	125°15.260			-			☐ ☐	
			:				°	°			-			☐ ☐	

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DAILY SCIENCE LOG

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Page 3 of 31

Month <u>July</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
13	C1	25	09:59	BE	NET	—	48°29.046	125°15.325	151		—	—	KY	☐ ☐	
			10:00	BO			48°29.049	125°15.376		141	-			☐ ☐	
			10:09	EN			48°29.040	125°15.425			-			☐ ☐	
14	C2	25	11:01	BE	ROS	US	48°26.190	125°09.180	160		—	—	CS	☒ ☐	
			11:05	BO			48°26.200	125°09.190		148	-			☐ ☐	
			11:08	EN			48°26.210	125°09.190			-			☐ ☐	
15	C2	25	11:13	BE	NET	—	48°26.178	125°09.240	159		—	—	KY	☐ ☐	
			11:21	BO			48°26.218	125°09.271		149	-			☐ ☐	
			11:24	EN			48°26.259	125°09.296			-			☐ ☐	
16	C3	25	12:33	BE	ROS	US	48°23.560	125°20.780	122		33-33	1	CS	☒ ☐	
			12:36	BO			48°23.570	125°20.750		112	-			☐ ☐	
			12:38	EN			48°23.580	125°20.740			-			☐ ☐	
17	C3	25	12:43	BE	NET	—	48°23.598	125°20.738	118		—	—	KY	☐ ☐	
			12:49	BO			48°23.607	125°20.750		111	-			☐ ☐	
			12:52	EN			48°23.667	125°20.797			-			☐ ☐	
18	LB07	25	13:32	BE	ROS	US	48°28.80	125°22.07	153		34-	1	DY	☐ ☐	
			13:35	BO			48°28.78	125°22.10			-			☐ ☐	
			13:39	EN			48°28.75	125°22.17			-			☐ ☐	
			:				°	°			-			☐ ☐	

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DAILY SCIENCE LOG

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Page 4 of 31

Month <u>May</u>			Year <u>2012</u>			Vessel <u>TULLY</u>				Cruise ID <u>2012 05</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
19	LB07	25	13:46	BE	NET	—	48° 28.729	125° 22.176		152	—	—	Ky	☐	
			13:51	B0			48° 28.704	125° 22.264	142		-			☐	
			13:54	EN			48° 28.722	125° 22.196			-			☐	
20	B8	25	14:50	BE	ROS	US	48° 34.550	125° 30.110	115		35-	1	CJ	☒	
			14:52	B0			48° 34.560	125° 30.080		105	-			☐	
			14:55	EN			48° 34.570	125° 30.060			-			☐	
21	B8	25	15:01	BE	NET	—	48° 34.545	125° 30.005	110		—	—	Ky	☐	
			15:03	B0			48° 34.616	125° 30.976		100	-			☐	
			15:06	EN			48° 34.619	125° 30.978			-			☐	
22	B7	25	16:03	BE	ROS	US	48° 32.010	125° 35.550	78		—	—	CJ	☒	
			16:05	B0			48° 32.030	125° 35.550		60	-			☐	
			16:07	EN			48° 32.030	125° 35.560			-			☐	
23	B7	25	16:12	BE	NET	—	48° 32.042	125° 35.541	80		—	—	Ky	☐	
			16:14	B0			48° 32.021	125° 35.537		70	-			☐	
			16:15	EN			48° 32.015	125° 35.537			-			☐	
24	LB08	25	17:23	BE	ROS	—	48° 25.310	125° 28.550	135		36 - 45		CJ	☒	Fires BZ 17 05
			17:26	B0			48° 25.340	125° 28.550		125	-			☐	SAMPLE 42 SILE
			17:30	EN			48° 25.400	125° 28.570			-			☐	B17 needed integrity, check
			:				.	.			-			☐	

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p 4.5 / 31

→ TOP CAP on S leaking

→ Bottle 1 d 7 integrity checked

↳ Bottle 17 fixed & is Sample 4D.

DAILY SCIENCE LOG

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Page 5 of 31

Month				Year		Vessel				Cruise ID					
MAY				2017		TULLY				2017-05					
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	LB08	25	17:43	BE	NET	—	48° 25.400	125° 28.470	140		—	—	KY	☐ ☐	
			17:46	BO			48° 25.391	125° 28.2459		130	-			☐ ☐	BONGO
		25	17:50	EN			48° 25.389	125° 28.458			-			☐ ☐	
26	LB08	26	18:01	BE	NET	/	48° 25.30	125° 28.51	133		—	—	KY	☐ ☐	
			18:07	BO			° 25.28	° 28.47		123	-			☐ ☐	RING → EVGENY
			18:09	EN			° 25.29	° 28.45			-			☐ ☐	
27	LB09	25	19:04	BE	ROS	US	48° 22.06	125° 34.84	150		46-51	9	MR	☒ ☐	
			19:08	BO			48° 22.06	125° 34.84		140	-			☐ ☐	
			19:20	EN			48° 22.05	125° 34.90			-			☐ ☐	
28	LB10	25	20:25	BE	ROS	US	48° 18.66	125° 41.41	152		55-	1	MR	☒ ☐	
			20:28	BO			48° 18.68	125° 41.36		144	-			☐ ☐	
			20:32	EN			48° 18.68	125° 41.34			-			☐ ☐	
29	LB11	25	21:30	BE	ROS	US	48° 15.28	125° 47.72	205		56-66	11	MR	☒ ☐	+1 FOR MORRIS
			21:34	BO			48° 15.28	125° 47.70		195	-			☐ ☐	NO S/N.
			21:51	EN			48° 15.28	125° 47.72			-			☐ ☐	
30	LB11	25	22:03	BE	NET	—	48° 15.30	125° 47.67	203		-			☐ ☐	
			22:11	BO			48° 15.29	125° 47.62		193	-		MG	☐ ☐	
			22:16	EN			48° 15.29	125° 47.63			-			☐ ☐	
			:				°	°			-			☐ ☐	

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p 5.5/31

Between LBO9 + LBO10. Swap new viton O-rings, both caps, for old ones (non viton)
MUSKINS 1 and 7.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 6 of 31

Month				Year			Vessel			Cruise ID					
MAY				2017			TULLY			2017-05					
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31	LB12	25	23:05	BE	ROS	US	48°12.91	125°51.93	510		67-81	15	MR	☒	
			23:14	BO			48°12.92	125°51.88		502	-			☐	
			23:41	EN			48°12.95	125°51.77			-			☐	
32	LB13	26	00:17	BE	ROS	US	48°10.56	125°55.98	907		82-	1	MR	☒	
			00:33	BO			48°10.54	125°56.05		916	-			☐	
			00:51	EN			48°10.50	125°56.10			-			☐	
33	LB14	26	01:26	BE	ROS	US	48°08.44	126°00.06	1186		83-100	18	MR	☒	
			01:46	BO			48°08.41	126°00.05		1185	-			☐	
			02:22	EN			48°08.42	126°00.06			-			☐	
34	LB15	26	03:21	BE	ROS	US	48°04.33	126°08.49	1574		101-	1	MR	☒	A 9.1 P 1558 S 1547 D 1540
			03:46	BO			48°04.38	126°08.56		1558	-			☐	
			04:13	EN			48°04.37	126°08.55			-			☐	PLANKTON RBR OFF
35	LB16	26	05:12	BE	ROS	US	48°00.52	126°17.01	1778		102-	1	MR	☒	A 10 P 1812 S 1789 D 1789
			05:44	BO			48°00.53	126°17.00		1812	-			☐	
			06:16	EN			48°00.53	126°17.00			-			☐	
36	LB16	26	06:25	BE	NET	-	48°00.53	126°16.98	1785		-		MS/TV	☐	BONGO 250m
			06:36	BO			48°00.57	126°16.98		250	-			☐	
			06:41	EN			48°00.59	126°16.98			-			☐	
			:				.	.			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 7 of 31

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37	LB16	26	06:48	BE	NET	—	48° 00.610	126° 17.023	1776		—			☐ ☐	Bottle to 1000
			07:23	BO			48° 00.658	126° 17.191		1000	—			☐ ☐	
			07:40	EN			48° 00.651	126° 17.324			—			☐ ☐	
38	LC12	26	10:29	BE	ROS	US	48° 14.930	126° 40.020	2715		—	—	CS	☐ ☐	Accidentally fired
			11:06	BO			48° 14.940	126° 40.170		2005	—			☐ ☐	bottle 1
			11:39	EN			48° 14.930	126° 40.230			—			☐ ☐	- follow to CTD WBC still bottle
39	LC12	26	11:44	BE	NET	—	48° 14.948	126° 40.304	2715		—	—	Ky	☐ ☐	
			11:53	BO			48° 14.975	126° 40.338		250	—			☐ ☐	
			11:58	EN			48° 15.000	126° 40.374			—			☐ ☐	
40	LC12	26	12:05	BE	NET	—	48° 15.045	126° 40.345	2715		—	—	Ky	☐ ☐	Bottle to 1000
			12:40	BO			48° 15.162	126° 40.379		1000	—			☐ ☐	
			12:58	EN			48° 15.209	126° 40.433			—			☐ ☐	
41	LC11	26	14:16	BE	ROS	US	48° 18.980	126° 26.640	1425		103-121	19	G	☒ ☐	
			14:45	BO			48° 18.970	126° 26.700		1450	—			☐ ☐	
			15:29	EN			48° 19.030	126° 27.040			—			☐ ☐	
42	LC10	26	16:16	BE	ROS	US	48° 22.440	126° 20.180	1240		—	—	CS	☐ ☐	
			16:38	BO			48° 22.400	126° 20.150		1237	—			☐ ☐	
			:	EN			°	°			—			☐ ☐	
			:				°	°			—			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
 CTD = Standalone CTD
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DRF = Drifter

=

Bottle Firing Method:

US = Up / Stop (default)

UN = Up / No stop

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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

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RE = Recover Mooring Time

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 8 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
43	LC09	26	18:03	BE	ROS	US	48°25.890	126°13.700	610		122-138	17	CS	☐ ☐	
			18:14	BO			48°25.880	126°13.710		608	-			☐ ☐	
			18:42	EN			48°25.810	126°13.760			-			☐ ☐	
44	LC09	26	18:55	BE	NET	—	48°25.860	126°13.719	613		—		MG	☐ ☐	Bongo to 250
			19:08	BO			48°25.861	126°13.698		250	-			☐ ☐	
			19:14	EN			48°25.859	126°13.682			-			☐ ☐	
45	LC09	26	19:25	BE	Ring		48°25.876	126°13.698	613		-		MG	☐ ☐	Ring to 250
			19:35	BO			48°25.872	126°13.702		250	-			☐ ☐	
			19:48	EN			48°25.876	126°13.704			-			☐ ☐	
46	A2	26	20:44	BE	ROS	—	48°22.68	126°03.81	352		—	Ø	MR	☒ ☐	
			20:51	BO			48°22.67	126°03.80		346	-			☐ ☐	
			20:57	EN			48°22.68	126°03.83			-			☐ ☐	
47	A2	26	21:03	BE	NET	—	48°22.68	126°03.80	352		-		MG	☐ ☐	Bongo to 250
			21:13	BO			48°22.69	126°03.83		250	-			☐ ☐	
			21:17	EN			48°22.68	126°03.83			-			☐ ☐	
48	LC08/A1	26	22:21	BE	ROS	US	48°29.44	126°07.02	199		139-150	12	MR	☒ ☐	
			22:25	BO			48°29.44	126°07.04		190	-			☐ ☐	
			22:40	EN			48°29.44	126°07.09			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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 DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
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Notes:

Time Code:

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P 8.5/31

After A2: NISKIN 5: Swap top/bottom caps VITON O-RINGS

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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	LC08/A1	26	22:47	BE	NET	-	48°29.444	126°07.092	199		-		JD	☐ ☐	Bongo to 190m
			22:55	BO			48°29.434	126°07.0806		190	-			☐ ☐	
			22:58	EN			48°29.436	126°07.067			-			☐ ☐	
50	LC07	26	23:48	BE	ROS	-	48°32.96	126°00.46	126		—	Ø	MR	☒ ☐	
			23:51	BO			48°32.98	126°00.47		120	-			☐ ☐	
			23:53	EN			48°32.98	126°00.47			-			☐ ☐	
51	LC06	27	00:36	BE	ROS	US	48°36.46	125°53.98	92		151-157	7	MR	☒ ☐	
			00:39	BO			48°36.47	125°53.98		82	-			☐ ☐	
			00:46	EN			48°36.47	125°53.96			-			☐ ☐	
52	LC06	27	00:56	BE	NET	-	48°36.48	125°53.95	92		-		JD	☐ ☐	Bongo to 85m
			01:05	BO			48°36.48	125°53.94		85	-			☐ ☐	
			01:07	EN			48°36.48	125°53.94			-			☐ ☐	
53	LC05/BS	27	01:52	BE	ROS	-	48°39.91	125°47.36	63		—	Ø	MR	☒ ☐	FIRE #9 JUST TO TEST.
			01:53	BO			48°39.91	125°47.37		54	-			☐ ☐	
			01:55	EN			48°39.90	125°47.37			-			☐ ☐	
54	LC05/BS	27	02:01	BE	NET	-	48°39.91	125°47.38	63		-		MG	☐ ☐	Bongo to 58
			02:05	BO			48°39.90	125°47.36		58	-			☐ ☐	
			02:06	EN			48°39.90	125°47.35			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Notes:

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Lowered NISKIN 9 ~ 3 cm

p 9.5/31

After LCOG: swap bottom/top vials O-rings NISKIN 9

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 10 of 31

Month				Year			Vessel			Cruise ID						
MAY				2017			TULLY			2017-05						
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	LC04	27	02:54	BE	ROS	US	48°43.39	125°40.83	165		158 - 167	10	MR	☒		
			02:58	BO			48°43.39	125°40.83		156	-			☐		
			03:10	EN			48°43.39	125°40.83			-			☐		
56	LC04	27	03:17	BE	NET		48°43.404	128°40.82	165		—		MG	☐	BONGO	
			03:31	BO			48°43.43	125°40.86		160	-			☐		
			03:34	EN			48°43.43	125°40.88			-			☐		
57	LC03	27	04:24	BE	ROS	—	48°46.93	125°34.27	134		—	∅	MR	☒	PROFILE VERY DIFFERENT DOWN	
			04:27	BO			48°46.93	125°34.24		126	-			☐	TOP CAST.	
			04:30	EN			48°46.94	125°34.21			-			☐		
58	LC02	27	04:56	BE	ROS	US	48°48.68	125°30.94	109		168 - 175	8	MR	☒		
			04:59	BO			48°48.68	125°30.93		101	-			☐		
			05:07	EN			48°48.70	125°30.92			-			☐		
59	LC01	27	05:37	BE	ROS	US	48°50.47	125°27.76	96		176 - 182	7	MR	☒		
			05:39	BO			48°50.47	125°27.78		86	-			☐		
			05:48	EN			48°50.46	125°27.81			-			☐		
60	LG01	27	11:21	BE	ROS	US	49°20.50	126°35.04	53		183 - 187	5	A	☐		
			11:23	BO			49°20.49	126°35.03		45	-			☐		
			11:28	EN			49°20.45	126°35.02			-			☐		
			:				°	°			-			☐		

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Notes:

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 11 of 31

Month <u>MAY</u>				Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
b1	LG102	27	11:56	BE	ROS	US	49° 18.75	126° 39.01	100		188 - 174	7	Q	☒	
			11:58	BO			49° 18.77	126° 38.98		89	-			☐	
			12:07	EN			49° 18.80	126° 38.92			-			☐	
b2	LG102	27	12:15	BE	NET	—	49° 18.72	126° 38.22	10598		-		KY	☐	
			12:17	BO			49° 18.70	126° 38.21		9088	-			☐	
			12:19	EN			49° 18.64	126° 38.24			-			☐	
b3	LG102	27	12:25	BE	NET	—	49° 18.62	126° 38.17	10598		-		KY	☐	
			12:29	BO			49° 18.63	126° 38.15		9088	-			☐	
			12:36	EN			49° 18.65	126° 38.17			-			☐	
b4	LG103	27	13:14	BE	ROS	US	49° 14.96	126° 43.62	123		195 -	1	Q	☒	
			13:16	BO			49° 14.97	126° 43.60		114	-			☐	
			13:20	EN			49° 14.95	126° 43.55			-			☐	
b5	LG104	27	13:59	BE	ROS	US	49° 11.29	126° 49.36	144		196 - 204	9	Q	☒	Oxygen curve was strange on ascent @ 30m
			14:03	BO			49° 11.27	126° 49.36			-			☐	
			14:15	EN			49° 11.26	126° 49.30			-			☐	
b6	LG104	27	14:20	BE	NET		49° 11.25	126° 49.27	142		-		KY	☐	Bongo to 132
			14:24	BO			49° 11.25	126° 49.24		132	-			☐	
			14:30	EN			49° 11.25	126° 49.22			-			☐	
			:				.	.			-			☐	

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Bottle Firing Method:

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Notes:

Time Code:

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Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 12 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>201705</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
67	LG05	27	15:23	BE	ROS	US	49° 07.39	126° 55.24	271		—	—	CS	☐ ☐	
			15:28	BO			49° 07.38	126° 55.19		260	-			☐ ☐	
			15:33	EN			49° 07.30	126° 55.17			-			☐ ☐	
68	LG06	27	16:23	BE	ROS	US	49° 03.55	127° 01.18	950		208-221	17	CS	☐ ☐	
			16:42	BO			49° 03.60	127° 01.03		931	-			☐ ☐	
			17:14	EN			49° 03.65	127° 01.08			-			☐ ☐	
69	LG07	27	18:07	BE	NET	US	48° 59.43	127° 07.21	1750		—	—	MR	☐ ☐	
			18:18	BO			48° 59.37	127° 07.16		250	-			☐ ☐	
			18:22	EN			48° 59.35	127° 07.09			-			☐ ☐	
70	LG07	27	18:30	BE	ROS	US	48° 59.368	127° 06:99	1750		—	—	CS/MR	☐ ☐	
			18:59	BO			48° 59.25	127° 06.79		1770	-			☐ ☐	
			19:27	EN			48° 59.24	127° 06.85			-			☐ ☐	
71	LG07-08	27	:		Net		.	.			-			☐ ☐	MOCNESS
72	LG08	27	21:09	BE	ROS	US	48° 55.35	127° 13.29	2057		222-223	2	MR	☒ ☐	
			21:47	BO			48° 55.26	127° 13.47		2006	-			☐ ☐	
			22:22	EN			48° 55.44	127° 13.33			-			☐ ☐	
73	LG09	27	23:12	BE	ROS	US	48° 51.78	127° 19.31	2051		224-229	6	MR	☒ ☐	
			23:46	BO			48° 51.17	127° 19.40		2009	-			☐ ☐	
		28	00:25	EN			48° 51.16	127° 19.45			-			☐ ☐	

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Time Code:

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 Version: 6 December 2016

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 13 of 31

Month <u>MAY</u>				Year <u>2017</u>		Vessel <u>TULLY</u>				Cruise ID <u>2017-05</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
74	LG09	28	00:54	BE	NET	UN	48° 51.06	127° 19.10	2051		-	-	MG	☐ ☐	MPS
			03:09	BO			48° 51.07	127° 19.30		2000	-			☐ ☐	
			04:13	EN			48° 50.99	127° 19.35			-			☐ ☐	
75	LG09	28	04:48	BE	NET		48° 51.19	127° 19.31	2051		-		MG	☐ ☐	EUGENEY NET
			05:03	BO			48° 51.31	127° 19.28		250	-			☐ ☐	
			05:08	EN			48° 51.35	127° 19.21			-			☐ ☐	
76	LBP8	28	11:39	BE	ROS	US	49° 48.63	128° 16.84	2067		230-235	6	OS	☒ ☐	Strange computer blips @ 200m (!)
			12:14	BO			49° 48.61	128° 16.69		2006	-			☐ ☐	
			12:55	EN			49° 48.64	128° 16.79			-			☐ ☐	
77	LBP8	28	13:02	BE	NET	—	49° 48.62	128° 16.81	2067		—	—	ky	☐ ☐	64 gm net
			13:12	BO			49° 48.60	128° 16.81		250	-			☐ ☐	
			13:16	EN			49° 48.60	128° 16.82			-			☐ ☐	
78	LBP8	28	13:34	BE	NET	—	49° 48.67	128° 16.76	2067		—	—	ky	☐ ☐	MPS
			14:20	BO			49° 48.50	128° 16.52		1000	-			☐ ☐	
			14:41	EN			49° 48.33	128° 16.35			-			☐ ☐	
79	LBP7	28	15:35	BE	ROS	US	49° 52.40	128° 11.04	2193		236-256	21	CL	☒ ☐	
			16:08	BO			49° 52.15	128° 11.78		2005	-			☐ ☐	
			:	EN			49° 51.71	128° 10.17			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 14 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
80	LBP7	28	17:10	BE	NET	—	49°51.60	128°10.04	2199		—	—	Ky	☐ ☐	
			17:18	Bo			49°51.46	128°09.88		250	-			☐ ☐	
			17:22	EN			49°51.39	128°09.81			-			☐ ☐	
81	LBP6	28	18:10	BE	ROS	—	49°56.17	128°05.46	887		—	—	A	☐ ☐	Had to stop to correct leads & few things
			18:30	Bo			49°56.04	128°05.32		150	-			☐ ☐	
			18:44	EN			49°56.050	128°05.060			-			☐ ☐	- BOTTOM DEPTH CRAZY!
82	LBP5	28	19:33	BE	ROS	—	50°00.04	128°00.04	1275		257 - 275	19	MR	☒ ☐	CLOSED ALL MISHINS
			19:58	Bo			49°59.97	128°00.15		1285	-			☐ ☐	TO TEST, 20-21 NOT
			20:39	EN			49°59.88	127°59.98			-			☐ ☐	STOP @ 180° w/ 2°
83	LBP5	28	20:51	BE	NET	—	50°00.02	127°59.91	1270		-		MG	☐ ☐	
			21:07	Bo			49°59.88	128°00.09		300	-			☐ ☐	
			21:14	EN			49°59.81	128°00.06			-			☐ ☐	
84	LBP4	28	21:43	BE	ROS	—	50°01.38	127°58.06	1030		—	(1)	MR	☒ ☐	FIRE B TO TEST
			22:01	Bo		-	50°01.33	127°57.79		1025	-			☐ ☐	NOT NEEDED
			22:17	EN			50°01.30	127°57.68			-			☐ ☐	
85	LBP3	28	22:47	BE	ROS	US	50°03.32	127°55.25	161		276 - 287	12	MR	☒ ☐	13 TO TEST
			22:50	Bo			50°03.35	127°55.18		150	-	(13)		☐ ☐	
			23:01	EN			50°03.33	127°55.01			-			☐ ☐	
			:				.	.			-			☐ ☐	

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 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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p 14.5 / 31

AFTER LBPS EVENT 82: NISKIN 13: SWAP BOTTOM / TOP CAP VITON O-RINGS

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 15 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
86	LBP3	28	23:05	BE	NET	—	50°03.29	127°55.03	160		-		MG	☐ ☐	BONGO TO 150
			23:13	BO			50°03.21	127°54.92		150	-			☐ ☐	
			23:16	EN			50°03.19	127°54.89			-			☐ ☐	
87	LBP3	28	23:29	BE	NET	—	50°03.22	127°55.03	160		-		MG	☐ ☐	RING NET TO 150
			23:36	BO			50°03.19	127°55.00		150	-			☐ ☐	
			23:40	EN			50°03.22	127°54.97			-			☐ ☐	
88	LBP2	28	23:56	BE	ROS	—	50°03.97	127°54.33	98		—	Ø	MR	☒ ☐	
			23:59	BO			50°03.98	127°54.31		88	-			☐ ☐	
		29	00:01	EN			50°03.99	127°54.28			-			☐ ☐	
89	LBP2	29	00:06	BE	NET	—	50°04.01	127°54.20	99		-		MG	☐ ☐	BONGO TO 95
			00:09	BO			50°04.01	127°54.13		95	-			☐ ☐	
			00:11	EN			50°04.01	127°54.07			-			☐ ☐	
90	LBP1	29	00:28	BE	ROS	—	50°04.78	127°52.83	56		—	Ø	MR/NZ	☒ ☐	
			00:30	BO			50°04.77	127°52.79		46	-			☐ ☐	
			00:31	EN			50°04.77	127°52.77			-			☐ ☐	
91	CPE2	29	05:33	BE	ROS	—	50°42.98	128°39.92	126		—	Ø	MR	☒ ☐	
			05:35	BO			50°42.98	128°39.94		115	-			☐ ☐	
			05:37	EN			50°42.98	128°39.96			-			☐ ☐	
			:				°	°			-			☐ ☐	

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:

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Notes:

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 16 of 31

Month				Year			Vessel			Cruise ID					
MAY				2017			TULLY			2017-05					
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
92	CPE2	29	05:47	BE	NET	—	50°42.95	128°39.98	125		-		MG	☐ ☐	Bottle to 120
			05:52	BO			50°42.95	128°39.94		120	-			☐ ☐	
			05:55	EN			50°42.96	128°39.93			-			☐ ☐	
93	LQ03	29	07:40	BE	ROS	UN	50°39.76	129°01.95	1245 (1)		-		CS	☒ ☐	Bottom reading very unsteady
			08:03	BO			50°39.86	129°01.82		1175	-			☐ ☐	only went to 1175m
			08:24	EN			50°39.94	129°01.70			-			☐ ☐	
94	LQ03	29	08:30	BE	NET	—	50°39.96	129°01.61	1119		-		Ky	☐ ☐	
			08:39	BO			50°39.98	129°01.54		250	-			☐ ☐	
			08:44	EN			50°39.99	129°01.53			-			☐ ☐	
95	J122	29	10:02	BE	ROS	UN	50°39.85	129°17.32	1316		-			☒ ☐	
			10:22	BO			50°40.03	129°17.21		1300	-			☐ ☐	
			10:50	EN			50°40.16	129°16.98			-			☐ ☐	
96	J122	29	10:58	BE	NET	—	50°40.19	129°16.85	1204		-		Ky	☐ ☐	
			11:06	BO			50°40.22	129°16.75		250	-			☐ ☐	
			11:10	EN			50°40.23	129°16.70			-			☐ ☐	
97	CS00	29	14:12	BE	ROS		50°27.73	129°55.08	2168		288-308	21	CS	☒ ☐	Niskin 13- swapped
			14:50	BO			50°27.67	129°54.91		2005	-			☐ ☐	top and bottom end
			15:44	EN			50°27.53	129°54.53			-			☐ ☐	caps. Bottle continued
			:				°	°			-			☐ ☐	to leak

Event Type:

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Time Code:

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 Version: 6 December 2016

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 17 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
98	CS00	29	15:49	BE	NET	-	50° 27.496	129° 54.43	2168		-		Ky	☐ ☐	BONCO
			15:58	BO			50° 27.445	129° 54.33		250	-			☐ ☐	
			16:01	EN			50° 27.421	129° 54.297			-			☐ ☐	
99	CS02	29	16:17	BE	NET	-	50° 27.33	129° 54.13			-			☐ ☐	MPS
			17:39	BO			50° 26.80	129° 53.61			-			☐ ☐	
			18:10	EN			50° 26.65	129° 53.62			-			☐ ☐	
100	CS00	29	19:15	BE	NET		50° 27.69	129° 55.36	2167		-			☐ ☐	MOCNESS
			19:19	BO			50° 27.81	129° 55.45		50	-			☐ ☐	
			19:24	EN			50° 27.89	129° 55.57			-			☐ ☐	
101	CS01	29	21:01	BE	ROS	-	50° 34.89	129° 41.55	2100		---	Ø	MR	☒ ☐	→
			21:37	BO			50° 34.90	129° 41.72		2005	-			☐ ☐	
			22:10	EN			50° 34.90	129° 41.93			-			☐ ☐	
102	CS01	29	22:20	BE	NET	-	50° 34.89	129° 42.00	2102		-		MG	☐ ☐	BONCO TO 250
			22:33	BO			50° 34.85	129° 42.06		250	-			☐ ☐	
			22:39	EN			50° 34.83	129° 42.09			-			☐ ☐	
103	CS02	30	00:19	BE	ROS	US	50° 41.95	129° 26.69	1857		309-328	20	MR	☒ ☐	
			00:49	BO			50° 41.73	129° 26.72		1875	-			☐ ☐	→
			01:43	EN			50° 41.13	129° 26.44			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Notes:

Time Code:

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P17.5 /31

After cast 101 - CS01: check + re-grease" all fluo connectors.
VISION 13,10,5: get the bottom cap to open more by tying a knot in the long (lower) lanyrd.

Fluo trace seems to be fixed ☺

Change transmissometer cable after cast 103 - CS02

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 18 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>				Cruise ID <u>2017-05</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	CS02	30	01:49	BE	NET	—	50°41.03	129°26.42	1898		-		MG	☐ ☐	BONGO TO 250
			02:02	BO			50°40.85	129°26.39		250	-			☐ ☐	
			02:08	EN			50°40.79	129°26.38			-			☐ ☐	
105	CS02	30	02:20	BE	NET	—	50°40.66	129°26.34	1906		-		MG	☐ ☐	RING NET TO
			02:31	BO			50°40.55	129°26.33		250	-			☐ ☐	
			02:36	EN			50°40.49	129°26.33			-			☐ ☐	
106	CS03	30	03:35	BE	ROS	US	50°45.56	129°20.09	242		329-	1	MR	☒ ☐	
			03:41	BO			50°45.57	129°20.12		236	-			☐ ☐	
			03:46	EN			50°45.52	129°20.15			-			☐ ☐	
107	CS03	30	03:54	BE	NET	—	50°45.50	129°20.18	247		-		MG	☐ ☐	BONGO TO 240
			04:06	BO			50°45.42	129°20.28		240	-			☐ ☐	
			04:11	EN			50°45.36	129°20.37			-			☐ ☐	
108	CS04	30	05:04	BE	ROS	US	50°49.23	129°13.17	93		330 - 336	7	MR	☒ ☐	
			05:07	BO			50°49.23	129°13.24	101	90	-			☐ ☐	
			05:16	EN			50°49.31	129°13.40			-			☐ ☐	
109	CS04	30	05:22	BE	NET	—	50°49.35	129°13.49	103		-		MG	☐ ☐	Bong to 95
			05:27	BO			50°49.38	129°13.48		95	-			☐ ☐	
			05:29	EN			50°49.40	129°13.46			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Notes:

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 19 of 31

Month <u>MAY</u>				Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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	NEW ODAS	30	08:38	BE	ROS	VS	50° 56.40	129° 58.810	2100		337 -	1	D	☐	
			09:13	BO			50° 56.34	129° 58.67		2005	-			☐	
			09:47	EN			50° 56.29	129° 58.43			-			☐	
111	NEW ODAS	30	09:53	BE	NET	-	50° 56.29	129° 58.41	2100		-		Ky	☐	
			10:01	BO			50° 56.26	129° 58.36		250	-			☐	
			10:05	EN			50° 56.25	129° 58.34			-			☐	
112	CS3B	30	12:35	BE	ROS	-	51° 00.04	129° 27.09	221		-	-	CS	☒	
			12:39	BO			51° 00.04	129° 27.15			-			☐	
			12:43	EN			51° 00.04	129° 27.19			-			☐	
113	CS3B	30	12:48	BE	NET	-	51° 00.04	129° 27.23	221		-	-	Ky	☐	
			12:54	BO			51° 00.03	129° 27.32		212	-			☐	
			12:58	EN			51° 00.04	129° 27.39			-			☐	
114	CS05	30	15:11	BE	ROS	-	50° 56.000	129° 00.000	63		-	-	CS	☐	
			15:15	BO			50° 56.00	129° 00.126		53	-			☐	
			15:16	EN			50° 55.99	129° 00.16			-			☐	
115	CS05	30	15:21	BE	NET	-	50° 55.99	129° 00.35	63		-	-	Ky	☐	
			15:23	BO			50° 56.01	129° 00.43		58	-			☐	
			15:24	EN			50° 56.02	129° 00.48			-			☐	
			:				°	°			-			☐	

Event Type:

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Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 20 of 31

Month <u>MAY</u>			Year <u>2017</u>		Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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							
116	CS1B	30	16:52	BE	ROS	-	50°53.02	128°40.03	73		-	0	0	☒	
			16:53	BO			50°53.03	128°40.06		63	-			☐	
			16:55	EN			50°53.05	128°40.08			-			☐	
117	CS1B	30	16:59	BE	NET	-	50°53.09	128°40.12	73		-	-	KY	☐	BONXU
			17:01	BO			50°53.12	128°40.22		68	-			☐	
			17:03	EN			50°53.14	128°40.25			-			☐	
118	CS06	30	18:01	BE	ROS	US	51°00.17	128°52.07	63		328-343	6	0	☒	
			18:02	BO			51°00.21	128°52.12		54	-			☐	
			18:10	EN			51°00.33	128°52.18			-			☐	
119	CS06	30	18:15	BE	NET	-	51°00.40	128°52.24	64		-	-	KY	☐	BONXU
			18:17	BO			51°00.44	128°52.25		58	-			☐	
			18:18	EN			51°00.45	128°52.24			-			☐	
120	CS07	30	19:08	BE	ROS	-	51°04.64	128°44.00	63		-	0	MR	☒	
			19:09	BO			51°04.66	128°43.99		52	-			☐	
			19:10	EN			51°04.67	128°43.98			-			☐	
121	CS07	30	19:17	BE	NET	-	51°04.72	128°43.92	63		-		JD	☐	BONXU
			19:20	BO			51°04.73	128°43.88		58	-			☐	
			19:22	EN			51°04.74	128°43.87			-			☐	
			:				.	.			-			☐	

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 Version: 6 December 2016

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 21 of 31

Month <u>May</u>			Year <u>2017</u>			Vessel <u>JP Tully</u>			Cruise ID <u>2017-05</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
122	CS07	30	19:34	BE	NET		51° 4.83	128° 43.82			-		CS	☐ ☐	MOCNESS
			19:37	BO			51° 4.75	128° 43.83		20	-			☐ ☐	50m wire out 40-60° angle
			19:40	EN			51° 4.71	128° 43.83			-			☐ ☐	1.5-2 km
123	CS08	30	20:32	BE	ROS	-	51° 08.51	128° 35.94	142		-	Ø	MR	☒ ☐	
			20:35	BO			51° 08.52	128° 35.93		133	-			☐ ☐	
			20:38	EN			51° 08.52	128° 35.97			-			☐ ☐	
124	CS08	30	20:48	BE	NET	-	51° 08.47	128° 35.88	142		-		MG	☐ ☐	BONGO TO 137
			20:54	BO			51° 08.45	128° 35.87		137	-			☐ ☐	
			20:57	EN			51° 08.44	128° 35.89			-			☐ ☐	
125	CS09	30	21:46	BE	ROS	US	51° 12.50	128° 27.97	194		344-354	11	MR	☒ ☐	
			21:50	BO			51° 12.49	128° 28.01		185	-			☐ ☐	
			22:02	EN			51° 12.57	128° 27.75			-			☐ ☐	
126	CS09	30	22:09	BE	NET	-	51° 12.56	128° 27.79	193		-		MG	☐ ☐	BONGO TO 188
			22:26	BO			51° 12.54	128° 27.83		188	-			☐ ☐	
			22:24	EN			51° 12.54	128° 27.89			-			☐ ☐	
127	CS09	30	22:30	BE	NET	-	51° 12.57	128° 27.94	194		-		MG	☐ ☐	RING NET TO 188
			22:40	BO			51° 12.55	128° 28.05		188	-			☐ ☐	
			22:44	EN			51° 12.54	128° 28.07			-			☐ ☐	
			:				°	°			-			☐ ☐	

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 Version: 6 December 2016

p 21.5 / 31

After cast 125 (CS09) : NISKIN 9: REPLACED TOP/BOTTOM CAPS VITON O-RINGS WITH OLD O-RINGS (RUBBER)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 22 of 31

Month <u>MAY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
128	CS10	30	23:33	Bo	ROS	—	51° 16.53	128° 19.91	80		—	(3)	MR	☒	CLOSED 9, 22, 23 TO TEST
			23:35	Bo			51° 16.54	128° 19.92		71	-			☐	ALL GOOD
			23:36	EN			51° 16.54	128° 19.91			-			☐	
129	CS10	30	23:42	Bo	NET	—	51° 16.54	128° 19.89	80		-		MG	☐	BONGO TO 75
			23:45	Bo			51° 16.54	128° 19.90		75	-			☐	
			23:47	EN			51° 16.53	128° 19.90			-			☐	
130	SS5	31	01:12	Bo	ROS	US	51° 27.98	128° 29.96	202		355-357	3	MR	☒	
			01:16	Bo			51° 27.94	128° 29.95		192	-			☐	
			01:22	EN			51° 27.87	128° 29.82			-			☐	
131	SS5	31	01:34	Bo	NET	—	51° 27.92	128° 29.97	201		-		MG	☐	BONGO TO 195
			01:44	Bo			51° 27.78	128° 29.86		195	-			☐	
			01:48	EN			51° 27.77	128° 29.74			-			☐	
132	SS4	31	03:54	Bo	ROS	—	51° 20.80	128° 59.97	240		—	Ø	MR	☒	TOUCH LONGER BETWEEN BEG-FILE + BEG-ARCH
133			04:03	Bo			51° 20.74	128° 59.88		~150	-			☐	
			04:05	Bo			51° 20.73	128° 59.88		~156 235	-			☐	
			04:09	EN			51° 20.75	128° 59.92			-			☐	
134	SS4	31	04:14	Bo	NET	—	51° 20.77	128° 59.97	242		-		MG	☐	
			04:25	Bo			51° 20.69	129° 00.04		238	-			☐	
			04:30	EN			51° 20.69	129° 00.08			-			☐	

Event Type:

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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
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DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

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Notes:

p 22.5/31

Cast 132, SS4: Went down to 150m. Stopped for 1-2 min because of wire angle.
Before going down again, got pressure spikes. Stopped file and
started cast 133 from ~156 to bottom (235) back up to surface.
Call final file 132.
Reboot laptop.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 23 of 31

Month				Year			Vessel			Cruise ID					
MAY				2017			TULLY			2017-05					
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
135	SS3	31	06:02	BE	ROS	US	51° 15.06	129° 21.46	290		358-360	3	MR	☒ ☐	WRONG STN NAME
			06:08	BO			51° 15.03	129° 21.46		282	-			☐ ☐	WROTE SS4
			06:15	EN			51° 15.00	129° 21.47			-			☐ ☐	
136	SS3	31	06:29	BE	NET		51° 14.97	129° 21.47	290		-		MG	☐ ☐	BONGO TO 250
			06:40	BO			51° 14.91	129° 21.31		250	-			☐ ☐	
			06:44	EN			51° 14.88	129° 21.27	584		-			☐ ☐	
137	SS2	31	08:23	BE	ROS	-	51° 12.96	129° 43.39		577	-	0	CS	☒ ☐	
			08:34	BO			51° 12.96	129° 43.39			-			☐ ☐	
			08:44	EN			51° 12.97	129° 43.34			-			☐ ☐	
138	SS1	31	10:01	BE	ROS	US	51° 12.06	130° 00.15	494		361-363	3	CS	☐ ☐	
			10:10	BO			51° 12.01	130° 00.05		485	-			☐ ☐	
			10:22	EN			51° 12.03	130° 00.04			-			☐ ☐	
139	SS0	31	14:24	BE	ROS	US	50° 59.97	130° 50.03	2626		-	1	CS	☐ ☐	NO SAMPLE # AS BOTTLE FOR LAB
			15:00	BO			50° 59.99	130° 50.87		2005	-			☐ ☐	INCUBATIONS
			15:33	EN			50° 59.97	130° 49.69			-			☐ ☐	
140	SS0	31	15:36	BE	NET	-	50° 59.97	130° 49.63	2626		-	-	KY	☐ ☐	
			15:48	BO			50° 59.94	130° 49.51		250	-			☐ ☐	
			15:51	EN			50° 59.93	130° 49.45			-			☐ ☐	
			:				.	.			-			☐ ☐	

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p. 23.5 / 31

For Chelsea:

Cast 139-SSO: It looks like something got stuck in the COND 1 cell on the downcast, cleared up at ~ 315 dbar. DO signal was affected also. Upcast seems to be ok.
COND 2 seems ok.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 24 of 31

Month <u>MAY / JUNE</u>			Year <u>2017</u>			Vessel <u>TULLY</u>				Cruise ID <u>2017-05</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
141	SSO	31	15:59	BE	NET	—	50°59.94	130°49.44	2637		—	—	Ky	☐ ☐	1000m Barge
			16:32	BO			50°59.82	130°49.08		1000	-			☐ ☐	
			16:50	EN			50°59.75	130°49.89			-			☐ ☐	
142	Dellwood	31	17:52	BE	SURVEY		50°50.62	130°52.39			-			☐ ☐	Dellwood Seamount Survey
		1	00:55	EN			50°50.39	130°51.34	2501		-			☐ ☐	
143	NLO1	1	04:27	BE	ROS	US	51°22.33	130°50.60	2195		364-369	6	MR	☒ ☐	→
			05:01	BO			51°22.26	130°50.55		2005	-			☐ ☐	
			05:46	EN			51°22.11	130°50.40			-			☐ ☐	
144	NLO1	1	05:56	BE	NET	—	51°22.08	130°50.30	2189		-		MG	☐ ☐	BONGO TO 250
			06:14	BO			51°21.93	130°50.18		250	-			☐ ☐	
			06:20	EN			51°21.90	130°50.13			-			☐ ☐	
145	NLO2	1	09:13	BE	ROS	—	51°33.54	130°16.33	842		—	✓	CS	☒ ☐	
			09:20	BO			51°33.50	130°16.39		853	-			☐ ☐	
			09:42	EN			51°33.58	130°16.42			-			☐ ☐	
146	NLO2	1	09:48	BE	NET	—	51°33.51	130°16.43	850		—	—	Ky	☐ ☐	BONGO TO 250
			09:54	BO			51°33.51	130°16.46		250	-			☐ ☐	
			10:02	EN			51°33.51	130°16.46			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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— = —

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Notes:

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 Version: 6 December 2016

p 24.5 131

Cast 143-NLO1: Transmissometer very spiky to ~125 on downcast.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 25 of 31

Month <u>June</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-05</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
147	NL03	1	13:02	BE	ROS	US	51°48.08	129°39.83	292		370-372	3	CS	☒	
			13:06	BO			51°48.67	129°39.81		284	-			☐	
			13:13	EN			51°48.10	129°39.79			-			☐	
148	NL03	1	13:17	BE	NET	-	51°48.10	129°39.78	292		-	-	Ky	☐	
			13:25	BO			51°48.07	129°39.74		250	-			☐	
			13:28	EN			51°48.05	129°39.76			-			☐	
149	NL04	1	15:41	BE	ROS	-	51°55.94	129°12.01	169		-	3 1	CS	☒	- fired 5m bottle for USC measurements
			15:43	BO			51°55.91	129°11.98		159	-			☐	
			15:47	EN			51°55.89	129°11.95			-			☐	
150	NL04	1	15:50	BE	NET	-	51°55.86	129°11.91	169		-	-	Ky	☐	
			15:54	BO			51°55.87	129°11.87		158	-			☐	
			15:59	EN			51°55.82	129°11.74			-			☐	
151	NL05	1	18:04	BE	ROS	US	51°40.24	128°54.42	45		373-375	3	CS	☒	
			18:05	BO			51°40.25	128°54.43		35	-			☐	
			18:09	EN			51°40.20	128°54.43			-			☐	
152	NL05	1	18:12	BE	NET	-	51°40.18	128°54.45	45		-	-	Ky	☐	
			18:14	BO			51°40.15	128°54.45		38	-			☐	
			18:15	EN			51°40.14	128°54.45			-			☐	
			:				°	°			-			☐	

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Notes:

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 26 of 31

Month				Year			Vessel			Cruise ID					
JUN				2017			TULLY			2017-05					
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
153	QCS1	01	20:48	BE	ROS	US	51°42.23	128°14.28	135		376-	1	MR	☒	
			20:51	BO			51°42.22	128°14.24		126	-			☐	
			20:54	EN			51°42.21	128°14.23			-			☐	
154	QCS1	01	21:01	BE	NET	-	51°42.11	128°14.18	128		-		JD	☐	BONGO
			21:10	BO			51°42.05	128°14.18		123	-			☐	
			21:13	EN			51°42.00	128°14.18			-			☐	
155	SS7	02	00:48	BE	ROS	-	51°24.69	127°47.46	124		-	Ø	MR	☒	
			00:51	BO			51°24.68	127°47.46		115	-			☐	
			00:53	EN			51°24.64	127°47.44			-			☐	
156	SS7	02	00:58	BE	NET	-	51°24.62	127°47.49	124		-		TV	☐	BONGO
			01:06	BO			51°24.59	127°47.49		125	-			☐	
			01:08	EN			51°24.59	127°47.48			-			☐	
157	SS6	02	02:18	BE	ROS	-	51°19.95	127°59.79	175		-	Ø	MR	☒	
			02:22	BO			51°19.94	127°59.79		166	-			☐	
			02:25	EN			51°19.94	127°59.80			-			☐	
158	SS6	02	02:31	BE	NET		51°19.90	127°59.85	175		-			☐	BONGO
			02:44	BO			51°19.86	127°59.67	170	166	-			☐	
			02:48	EN			51°19.84	127°59.61			-			☐	
			:				°	°			-			☐	

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Version: 6 December 2016

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 27 of 31

Month <u>JUN</u>				Year <u>2017</u>			Vessel <u>TULLY</u>				Cruise ID <u>2017-05</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
159	CPE1	02	05:18	BE	ROS	—	51°00.06	127°49.87	155		—	Ø	MR	☒	
			05:21	BO			51°00.05	127°49.82		147	-			☐	
			05:24	EN			51°00.05	127°49.80			-			☐	
160	CPE1	02	05:30	BE	NET	—	51°00.04	127°49.76	157		-		TV	☐	BONGO
			05:39	BO			51°00.01	127°49.69		152	-			☐	
			05:43	EN			51°00.01	127°49.61			-			☐	
161	14	02	20:54	BE	ROS	US	49°52.91	124°59.69	311		377-379	3	MR	☒	
			20:59	BO			49°52.90	124°59.70		302	-			☐	
			21:08	EN			49°52.91	124°59.71			-			☐	
162	14	02	21:16	BE	NET	—	49°52.93	124°59.71	311		-		MR	☐	BONGO
			21:30	BO			49°52.95	124°59.69		305	-			☐	
			21:37	EN			49°52.94	124°59.68			-			☐	
163	14	02	21:47	BE	NET		49°52.93	124°59.65	311		-			☐	MOCNESS
			22:04	BO			49°52.59	124°59.09		300	-			☐	
			22:15	EN			49°52.39	124°58.80			-			☐	
164	11	03	00:13	BE	ROS	US	49°42.42	124°43.46	300		380-392	13	MR	☒	
			00:19	BO			49°42.42	124°43.44		290	-			☐	
			00:36	EN			49°42.41	124°43.48			-			☐	
			:				°	°			-			☐	

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Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 28 of 31

Month <u>JUN</u>			Year <u>2017</u>		Vessel <u>TULLY</u>		Cruise ID <u>2017-05</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	
165	11	03	00:48	BE	NET	/	49°42.41	124°43.52	296		/		MG	☐	☐	BONGO
			01:02	BO			49°42.41	124°43.49		290	-			☐	☐	
			01:08	EN			49°42.41	124°43.47			-			☐	☐	
166	CPF2	03	03:15	BE	ROS	US	49°28.06	124°30.00	325		393-395	3	MR	☒	☐	
			03:21	BO			49°28.14	124°29.97		321	-			☐	☐	
			03:30	EN			49°28.10	124°30.03			-			☐	☐	
167	CPF2	03	03:36	BO	NET	-	49°28.09	124°30.05	322		-			☐	☐	BONGO
			03:48	BO			49°28.06	124°30.05		315	-			☐	☐	
			03:53	EN			49°28.05	124°30.08			-			☐	☐	
168	CPF1	03	06:04	BE	ROS	US	49°21.98	124°04.98	243		396-398	3	MR	☒	☐	
			06:09	BO			49°21.97	124°04.97		235	-			☐	☐	
			06:16	EN			49°21.98	124°04.96			-			☐	☐	
169	CPF1	03	06:24	BE	NET	-	49°21.97	124°04.96	243		-		MG	☐	☐	BONGO
			06:34	BO			49°21.97	124°04.94		238	-			☐	☐	
			06:38	EN			49°21.96	124°04.93			-			☐	☐	
170	22	03	08:59	BE	ROS	US	49°40.25	124°16.43	352		399-410	12	MR	☒	☐	
			09:06	BO			49°40.29	124°16.44		347	-			☐	☐	
			09:24	EN			49°40.29	124°16.44			-			☐	☐	
			:				.	.			-			☐	☐	

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Version: 6 December 2016

Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 29 of 31

Month <u>June</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-05</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
171	22	03	09:29	BE	NET	—	49° 40.30	124° 16.43	355		—	—	CS	☐ ☐	Bongo
			09:41	BO			49° 40.31	124° 16.40		348	-			☐ ☐	
			09:46	EN			49° 40.31	124° 16.40			-			☐ ☐	
172	24	03	11:16	BE	ROS	US	49° 30.28	124° 05.98	425		411-413	3	CS	☒ ☐	Camp blips. Screens turned off →
			11:23	BO			49° 30.30	124° 06.00		414	-			☐ ☐	
			11:34	EN			49° 30.32	124° 06.01			-			☐ ☐	
173	24	03	11:39	BE	NET	—	49° 30.31	124° 06.03	423		—	—	Ky.	☐ ☐	
			11:50	BO			49° 30.33	124° 06.05		419	-			☐ ☐	
			11:56	EN			49° 30.33	124° 06.07			-			☐ ☐	
174	28	03	13:40	BE	ROS	US	49° 24.09	123° 45.28	135		414-416	3	CS	☐ ☐	→
			13:44	BO			49° 24.10	123° 45.31		124	-			☐ ☐	
			13:50	EN			49° 24.09	123° 45.30			-			☐ ☐	
175	28	03	13:54	BE	NET	—	49° 24.08	123° 45.31	135		—	—	Ky.	☐ ☐	
			13:58	BO			49° 24.06	123° 45.33		130	-			☐ ☐	
			14:01	EN			49° 24.09	123° 45.34			-			☐ ☐	
176	GE01	03	15:20	BE	NET	OS	49° 15.04	123° 45.14	400		-		D	☐ ☐	MUCIERS
			15:39	BO			49° 15.10	123° 44.20		390	-			☐ ☐	
			15:54	EN			49° 15.22	123° 43.52			-			☐ ☐	
			:				°	°			-			☐ ☐	

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 Version: 6 December 2016

P29.5 / 31

→ Event 172: Comp clicked & screens went black @ bottom of cast (similar to event 76)

→ Event 174: Fired bottle 1 at the bottom accidentally. Samples taken from riser 2-4

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 30 of 31

Month <u>June</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-05</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
177	GEO1	03	16:18	DE	ROS	US	49° 15.07	123° 45.09	397		414-425	12	dy	☒	
			16:25	BO			49° 15.16	123° 45.07		392	-			☐	
			16:43	EN			49° 15.17	123° 45.09			-			☐	
178	GEO1	03	16:48	BE	NET	—	49° 15.17	123° 45.07	397		—	—	Ky	☐	Bomb to 390
			17:00	BO			49° 15.15	123° 45.05		390	-			☐	
			17:07	EN			49° 15.14	123° 45.04			-			☐	
179	GEO1	03	17:21	BE	NET	—	49° 15.13	123° 45.02	401		—	—	Ky	☐	MPS to 390
			17:42	BO			49° 15.11	123° 44.95		390	-			☐	
			17:51	EN			49° 15.12	123° 44.89			-			☐	
180	38	03	19:33	BE	ROS	US	49° 11.96	123° 26.35	305		426-428	3	MR	☒	
			19:39	BO			49° 11.95	123° 26.31		294	-			☐	
			19:47	EN			49° 11.97	123° 26.31			-			☐	
181	38	03	19:59	BE	NET	—	49° 12.03	123° 26.45	306		-		JD	☐	
			20:11	BO			49° 12.02	123° 26.55		298	-			☐	
			20:18	EN			49° 12.03	123° 26.58			-			☐	
182	41	03	21:25	BE	ROS	US	49° 03.29	123° 22.40	245		429-441	13	MR	☒	
			21:29	BO			49° 03.30	123° 22.43		236	-			☐	
			21:46	EN			49° 03.23	123° 22.44			-			☐	
			:				.	.			-			☐	

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

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Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 31 of 31[illegible]

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