

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-01

DATE:

From:

Feb 6, 2017

To:

VESSEL:

J.P. Tully

PROJECT(S):

Line P

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

WaterProperties.ca

Captain: VICTOR GROMMYR

First Officer: Kevin McKenna

Second Officer: KEVEN PAPHITALI

Third Officer: ANDREW BAKASHIN

Fishing Master: PETER MITCHELL

Chief Engineer: RYAN BRAIDWOOD

Mission Participants / Agencies:

DF0-T05 / DF0-B10 / VVIC / EZ / VBe

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

1st Leg Scientific Personnel:

Chief Scientist:

MARIE ROBERT 06-18 A

Name

Watch Cabin

Name

Watch Cabin

LUKE HARPIN 12-18 B

Doug Yelland 12-24 D

MICHAEL ARYCHUK DMS E

RICHARD NELSON 06-12 F

WILLIAM	BURR	DO-06	F
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TABLE SHOWN 00-06 6

HERISA VENELO 12-24 H

RIANA BURHAM 06-12 11

MARK BELTON 4 00-1

2nd Leg Scientific Personnel:

Chief Scientist:

Name

Watch Cabin

Name

Watch Cabin

**** 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 CTD (Laptop)

Data acquisition program: Seasave

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

Primary CTD

Make: SBE model: 9+ serial number: 506

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 5013

Secondary conductivity serial number: 3394

Transmissometer: Wet Labs Model: C-Star s/n: 1185DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 30X s/n: 3642 P, S or NO pump?

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

Oxygen sensor: _____ Model: _____ s/n: 1438 P, S or NO pump? → 3234

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

Other sensors: Altimeter s/n: 62354 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: 105
Volume of bottles (litres): 10 L

Winches:

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

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: SCRIPPS Model: _____ Kit Number: #2
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: _____

Sampling interval (seconds): 30

Fluorometer sensor serial number: WS35-889P

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

LOTS OF SAC SPIKES TEMP 200Ks SUSPICIOUS

ADCP Setup:

	Computer time zone:	User Exits:	Name:	Exit points:
	Sampling interval (sec): _____		Name: _____	Exit points: _____
	Bin Length: (2 ¹ x): _____		Name: _____	Exit points: _____
	Pulse Length: _____		Work File: _____	
	Buffer (bytes): _____			
	Gyro Offset: _____			

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

CTD Test Cast Information

Test Cast along side? Yes ☐ No ☒

Comments _____

Test Cast in Saanich Inlet or other location? Yes ☒ No ☐

Comments _____

CTD pressure reading on deck (db), before cast: _____ after cast: _____

Pumps working? Yes (0011) No (0010)

Secondary Temp – Primary Temp: _____
(Average from the mixed region)

Secondary Salinity – Primary Salinity: _____
(Average from the mixed region)

Additional Comments:

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Month <u>Feb</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-01</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	SI-Test	6	00:04	DE	ROS	US	48° 39.54	123° 29.95	171		-			☐	
			00:07	DO			48° 39.55	123° 29.95		158	1 - 24	24	dy	☒	
			00:10	END			48° 39.55	123° 29.94			-			☐	
2	SI-Test2	7	00:11	DE	ROS	US	48° 39.54	123° 29.93	169		-	-		☐	Didn't clear
			00:13	DO			48° 39.55	123° 29.93		50	-			☐	the water
			00:14	EN			48° 39.55	123° 29.93			-			☐	before starting
3	D1	7	01:56	DE	DRF		48° 41.90	123° 16.24	255		-		dy/tv	☐	Sponge Bob 557 + 560
4	D2	7	02:37	DE	DRF		48° 32.93	123° 13.24	203		-		"	☐	Sponge Bob 445 + 555
5	D3	7	03:21	DE	DRF		48° 24.13	123° 14.07			-		"	☐	Sponge Bob 430 + 559
6	D4	7	04:31	DE	DRF		48° 18.29	123° 28.16			-		"	☐	Sponge Bob 564 + 558
7	JF1	7	04:47		LOOP		48° 16.0258	123° 31.0436			5007		"	☐	
8	D5	7	05:19	DE	DRF		48° 16.40	123° 40.44			-		"	☐	Sponge Bob 432 + 565
9	D6	7	06:12	DE	DRF		48° 17.62	123° 55.20			-		"	☐	Sponge Bob 428 + 431
10	JF2	7	06:32		LOOP		48° 18.76	123° 59.78			5010		"	☐	
11	D7	7	07:11	DE	DRF		48° 21.39	124° 09.43			-		"	☐	Sponge Bob 553 + 429
12	D8	7	08:11	DE	DRF		48° 25.4504	124° 23.8842	201		-		MB	☐	Sponge Bob 554 + 556
13	JF3	7	08:56	RE	Loop		48° 27.09	124° 29.97	219		5013		MB	☐	2xchl + 152l + Nut
14	D9	7	09:09	DE	DRF		48° 29.39	124° 38.91	244		-		MB	☐	FORGOT NUMBERS SPONGE BOB
15	JF4	7	10:22	RE	Loop		48° 32.19	124° 59.75	52		5015		MB	☐	2xchl + 152l + Nut

Event Type:

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

Event Type:

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
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MR = Messenger Release Time
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Produced by the Water Properties Group, IOS

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Version: 6 December 2016

Notes:

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Month <u>FEB</u>				Year <u>2017</u>		Vessel <u>JP TULLY</u>				Cruise ID <u>2017-01</u>					Comments
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	
							Latitude	Longitude							
16	P3	7	14:52	BE	ROS	US	48°37.45	126°20.04	84		104-106	3	MB	☒ ☐	O2 check
			15:05	BO			48°37.59	126°20.01		805	-			☐ ☐	
			15:21	EN			48°37.55	126°19.96			-			☐ ☐	
17	P4	7	16:41	BE	ROS	US	48°38.91	126°40.03	1320		1-24	24	MB	☒ ☐	CS CAT 500m
			16:50	BO			48°38.92	126°40.07		500	-			☐ ☐	
			17:04	EN			48°38.97	126°40.09			-			☐ ☐	
18	P4	7	17:29	BE	ROS	US	48°38.93	126°39.90	1325		25-43	19	MB	☒ ☐	+LOOPS 2xOK 1xSAL 1xNOT
			17:47	BO			48°39.04	126°39.92		1300	-			☐ ☐	
			18:32	EN			48°38.04	126°40.02			-			☐ ☐	
19	P4	7	19:13	BE	NET	-	48°39.9153	126°40.1343	1330		-	-	MB	☐ ☐	Bongo 250
			19:21	BO			48°38.8990	126°40.1325		250	-			☐ ☐	
			19:26	EN			48°38.9221	126°40.1347			-			☐ ☐	
20	P4	7	19:49	BE	NET	-	48°38.9541	126°40.1049	1324		-	-	MY	☐ ☐	Bongo 1200
			20:26	BO			48°38.9292	126°40.0843		1200	-			☐ ☐	
			20:56	EN			48°38.9968	126°40.0956			-			☐ ☐	
21	P4	7	21:38	DE	ROS	US	48°39.07	126°40.04	1308		-	-	MY	☒ ☐	UBC
			22:02	BO			48°39.04	126°40.02		1315	44-59			☐ ☐	large glitch @ 100m
			22:26	EN			48°39.01	126°39.87			-			☐ ☐	
			:				.	.			-			☐ ☐	

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Notes:

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O₂ readings very low, very noisy per ~ 300m, Altimeter stuck @ 10 on the way up.
→ after P3 changed out O₂ sensor to 43-3234.
→ Niskin #1 very leaky on bottom cap, tightened up with tubing inside.

→ Altimeter not kicking in near bottom? Went to 1325 and pressure stopped climbing, hit bottom?

← Oxygen jumped, ~~ceased~~ from ~0.2 → 3 on screen ~~AAAAAAAAAAAA~~
CAST ABORTED - Will Redo

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Month			Year			Vessel			Cruise ID						
FEBRUARY			2017			TULLY			2017-01						
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
22	P4	7	22:48	BE	ROS	US	48° 39.07	126° 39.91	1300		-		DY	☒	DMS/UVic
			22:56	BO			48° 39.12	126° 39.89		300	60-79	20		☐	+ 2xCHL LOOP
			23:21	EN			48° 39.11	126° 40.20			-			☐	
23	P4	8	00:05	BE	ROS	US	48° 39.02	126° 40.13	1314		44-59	16	MF/HF	☒	UBC TRL 2
			00:26	BO			48° 39.03	126° 40.11		1300	-		HA: ↑	☐	PLT = 10 DOWNCAST
			00:52	EN			48° 39.04	126° 40.11			-			☐	
24	P4	8	01:06	BE	NET		48° 39.000	126° 39.9195	1311		-			☐	WHITE net
			01:12	BO			48° 38.9672	126° 39.9356		250	-			☐	Eugeny
			01:24	EN			48° 38.9670	126° 39.9377			-			☐	
25	P4	8	01:42	BE	ROS	US	48° 38.93	126° 40.03	1317		-		M	☒	CESUM
			01:45	BO			48° 38.93	126° 40.02		150	80-103	24		☐	
			:	EN			.	.			-			☐	
26	P8 undelay	8	08:46	BE	Loop	-	48° 48.20	128° 38.03	2526	-	5026	-	MR	☐	2xCHL + 1WUT + 1Sal
27	~P12-P13	8	17:12	BE	Loop	-	48° 59.62	131° 05.54	2948	-	5027	-	MR	☐	" "
28	P14	8	22:31	BE	Loop		49° 06.17	132° 40.03			-		W	☐	CS loop 60L
29	P16-P17	9	08:21	BE	Loop	-	49° 18.67	135° 31.65	3581	-	5029	-	MR	☐	2xCHL + 1WUT + 1Sal
30	P19	9	15:58	BE	Loop		49° 28.33	137° 41.40	3934		-		TR	☐	CS loop 60L
31	P19-P20	9	16:44	BE	Loop		49° 29.27	137° 54.38	3967	-	5031	-	MR	☐	2xCHL + 1WUT + 1Sal
			:				.	.			-			☐	

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Changed out altimeter from spare risette, did not find an instrument number on swapped in altimeter.

1519 UTC, 9 Feb. 25²³² COMM NOT WORKING TSG START PINE 0004
WON'T START, NO COMM
START 0004 1822 9 Feb UTC

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Month <u>FEBRUARY</u>			Year <u>2017</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>207-01</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
32	P20	9	19:49	BE	ROS	US	49°34.02	138°40.11	3968		107-130	24	MR/DJ	☒ ☐	DEEP CAST TAP OFF + 200
			21:12	BO			49°34.01	138°39.95		4025	+5032			☐ ☐	Δ Fm deep
			:	EN			49°34.05	138°39.96			-			☐ ☐	P=4025 S=3969 D=3953 A=109
33	P20	10	00:38	BE	ROS	US	49°34.04	138°40.01	3966		-			☐ ☐	clock (PC) reset
			00:46	BO			49°34.04	138°39.98		300	131-146	16	DY/TJ	☒ ☐	NMEA slow to
			01:08	EN			49°34.02	138°40.00			+5033			☐ ☐	start DMS
34	P20	10	01:18	BE	NET		49°34.0189	138°40.0177	3966		-			☐ ☐	
			01:27	BO			49°34.0452	138°40.0024		250	-			☐ ☐	Bongo to 250
			01:34	EN			49°34.0429	138°40.0350			-			☐ ☐	
35	P20		01:48	BE	NET		49°34.0433	138°40.0089	3966		-			☐ ☐	Buoy net to 250
			01:58	BO			49°34.0600	138°40.0048		250	-			☐ ☐	
			02:04	EN			49°34.0748	138°40.0320			-			☐ ☐	
36	P21		06:19	BE	ROS	US	49°30.01	139°39.98	3960		-		DY/TJ	☒ ☐	Cesium to 200
			06:25	BO			49°38.00	139°40.01		200	147-170	24		☐ ☐	
			06:35	EN			49°37.96	139°40.07			-			☐ ☐	
37	P21		07:02	BE	ROS	US	49°38.00	139°40.01	3960		-		DY/TJ	☒ ☐	
			07:47	BO			49°37.99	139°40.04		2005	171-194	24		☐ ☐	
			08:43	EN			49°38.04	139°40.33			-			☐ ☐	
			:				.	.			-			☐ ☐	

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> Loops @ P20 - 2x oxy
1x sal
1x wt

STOPPED @ ~1800 to straighten wire + ~370, on way up.

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38	P22	10	14:07	BE	ROS	US	49°41.95	140°40.06	3948		195-197	3	MB	☒	
			14:42	BO			49°41.90	140°40.06		2005	-			☐	
			15:27	EN			49°41.92	140°40.07			-			☐	
39	P22-P23	10	17:30	BE	Loop	-	49°43.50	141°02.43	3983	-	5039	-	MB	☐	Loop 2 cal + 1 nut + 1 set
40	P23	10	20:54	BE	ROS	US	49°46.03	141°39.87	4055		-		DY/TV	☐	
			21:37	BO			49°46.03	141°40.01		2005	198-221	24		☐	
			22:22	EN			49°46.12	141°40.17			-			☐	
41	P23	10	21:03		LOOP		49°46.02	141°39.92	4054		-			☐	Cesium Loop
42	P24	10	03:36	BE	ROS	US	49°50.27	142°39.96	3985		-		DY/TV	☒	Pump turned itself
			04:22	BO			49°50.24	142°39.94		2005	222-	1		☐	off again at
			05:06	EN			49°50.19	142°40.23			-			☐	some point
43	P25	11	09:39	BE	ROS	US	50°0.06	143°36.28	4152		223-	1	MB	☒	
			10:14	BO			50°0.01	143°36.24		2005	-			☐	
			10:47	EN			50°0.03	143°36.23			-			☐	
44	P26	12	06:14	BE	ROS	US	50°0.11	144°59.91	4251		-		DY	☒	Date on PC fixed
			06:58	BO			50°0.11	144°59.91		2000	225-240	16		☐	UBC cast
			07:43	EN			50°0.11	144°59.91			-			☐	PAR OFF
			:				°	°			-			☐	
			:				°	°			-			☐	

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— pump may have turned itself off on downcast at $\sim 1000\text{m}$ (large oxygen spike) although trace looked normal after that until noticed on upcast, $\sim 900\text{m}$

- stopped @ $\sim 820\text{m}$ down to straighten wire + @ 25m coming up
- shutdown @ 5m , for easier recovery

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
45	P26	12	07:55	BE	NET	—	50°00.1064	144°59.9118	4252		-			☐ ☐	Bongo to 250
			08:06	BO			50°00.1095	144°59.9070		250	-		MB	☐ ☐	
			08:11	EN			50°00.1070	144°59.9103			-			☐ ☐	
46	P26	12	08:14	BE	NET	—	50°00.1059	144°59.9118	4252		-		MB	☐ ☐	Bongo to 1200
			08:56	BO			50°00.1075	144°59.9110		1200	-			☐ ☐	(flowmeter side twisted closed)
			09:16	EN			50°00.1069	144°59.9125			-			☐ ☐	
47	P26	12	09:33	RG	ROS	US	50°00.11	144°59.91	4255		2411-264	24	MB	☒ ☐	Shallow Cr
			09:36	BO			50°00.11	144°59.91		150	-			☐ ☐	Cr
			09:44	GN			50°00.11	144°59.91			-			☐ ☐	
48	P26	12	10:07	RG	ROS	US	50°00.06	144°59.95	4255		265-288	24	MB	☒ ☐	
			10:18	BO			50°00.06	144°59.96		500	-			☐ ☐	
			10:32	GN			50°00.06	144°59.95			-			☐ ☐	
49	P26	12	10:45	BE	NET	—	50°00.03	144°59.57	4255		-	-	MB	☐ ☐	Bongo 1200m
			11:26	BO			50°00.06	144°59.96		1200	-			☐ ☐	(redo)
			11:46	EN			50°00.04	144°59.97			-			☐ ☐	flowmeter side twisted and not clipped
50	P26	12	12:09	BE	ROS	US	50°00.01	145°00.00	4255		289-312	24	MB	☒ ☐	DEEP CAST
			13:26	BO			50°00.01	145°00.00		4317	-			☐ ☐	
			15:10	GN			50°00.01	145°00.00			-			☐ ☐	D=4236 S=4254 P=4317 A=10
							°	°			-			☐ ☐	

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:

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Month <u>FEBRUARY</u>				Year <u>2017</u>		Vessel <u>SP TULLY</u>				Cruise ID <u>2017-01</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
51	P26	12	16:36	BE	ROS	US	50° 0.01	145° 0.02	4255		313-332	20	MB	☒	DM S CAST
			16:43	BO			50° 0.01	145° 0.01		300	-			☐	
			17:05	EN			50° 0.01	145° 0.02			-			☐	
52	P26	12	17:20	BE	NET	-	50° 00.012	145° 00.016	4253		-	-	MB	☐	White Net 250
			17:29	BO			50° 00.012	145° 00.017		250	-			☐	
			17:33	EN			50° 00.011	145° 00.017			-			☐	
53	P26	12	17:41	BE	NET		50° 00.013	145° 00.017	4250		-		MB	☐	White Net
			17:50	BO			50° 00.014	145° 00.014		250	-			☐	250
			17:53	EN			50° 00.012	145° 00.017			-			☐	(Redo)
54	P26	12	18:08	DE	DRF		49° 59.91	144° 59.89			-		DT	☐	Argo 437
55	P26 → EAST	13	10:22	BE	Loop	-	49° 16.06	143° 49.94	4226	-	5055-	-	MB	☐	2nd row, 1st set
56	P25 South	13	14:49	BE	Loop	-	49° 6.17	143° 47.88	3699	-	508-	-	MB	☐	2nd row, 1st set
57	P25 South	13	14:57	BL	loop		49° 05.95	143° 48.04			-		DT	☐	Cs loop 60.0
58	P22 South	14	16:00	BE	Loop	-	49° 32.25	140° 32.70	4003	-	5058-	-	MB	☐	Loop 2nd row 1st set 1st set
59	P19	15	03:05	BE	ROS	US	49° 30.06	137° 40.04			-		DT/TV	☒	
			03:49	BO			49° 30.08	137° 40.14		2005	333-	1		☐	
			04:28	EN			49° 30.08	137° 40.13			-			☐	
60	P18	15	08:35	BE	DRF	-	49° 25.9466	136° 41.7449			-		DT/MB	☐	ARGO 447
61	P18	15	08:35	BE	Loop		49° 25.85	136° 41.60	3835	-	-	-	RN/MB	☐	Cs Loop 602

Event Type:
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 DRF = Drifter
 =

Bottle Firing Method:
 US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Time Code:
 BE = Beginning Time of Cast
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 DE = Deployment Time
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Notes:

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UP + DOWN on way up @ 75 to look @ which

As we leave Papa, start TSG file 0005

1812 UTC 49 59.66 T

144 59.62

- weight clips came off of net, try again

- one clip still came off of net.

1514 14 FEB UTC: STOP TSG FILE 0005 TO TRY TO TAKE AIR OUT OF TSG

RESTART ADCP TO GET SOUNDING

FILE 0006: PLAY WITH TSG PLUMBING TO TRY INCREASING FLOW.

DATA MAY NOT BE GREAT

- put in a valve in before the fluorometer to be able adjust flow. Got 12% to 6. Stopped and restarted TSG with file 0007

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Month <u>FEBRUARY</u>			Year <u>2017</u>			Vessel <u>GP TULLY</u>			Cruise ID <u>2017-01</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
62	P18	15	08:54	BE	ROS	US	49° 26.10	136° 40.10	3835		334-336	3	MB	☒	
			09:29	BO			49° 26.12	136° 40.14		205	-			☐	
			10:03	EN			49° 26.16	136° 40.15			-			☐	
63	P17	15	14:03	BE	ROS	US	49° 20.98	135° 39.95	3560		337-	1	MB	☒	
			14:44	BO			49° 20.95	135° 39.86		205	-			☐	
			15:18	EN			49° 20.78	135° 39.81			-			☐	
64	P16	15	19:23	BE	ROS	US	49° 17.00	134° 40.00	3633		338-339	16	MB	☒	DMS CAST
			19:29	BO			49° 16.99	134° 40.01		300	-			☐	+ Load Zich
			19:52	EN			49° 17.02	134° 40.14			-			☐	
65	P16	15	20:05	BE	NET	-	49° 16.98	134° 40.21	3635		- - -	-	DY	☐	Bongos 250
			20:14	BO			49° 16.9909	134° 40.1740		250	-			☐	
			20:22	EN			49° 17.00	134° 40.17			-			☐	
66	P16	15	20:27	BE	NET	-	49° 17.00	134° 40.20	3635		- - -	-	DY	☐	Bongos 1200
			21:20	BO			49° 17.0092	134° 40.0470		1200	-			☐	
			21:49	EN			49° 17.02	134° 40.60			-			☐	
67	P16	15	22:02	BE	NET	-	49° 17.01	134° 40.03	3636		-		DY	☐	Evgeny net
			22:23	BO			49° 17.0384	134° 40.0090		250	-			☐	
			22:29	EN			49° 17.0470	134° 40.0347			-			☐	
			:				°	°			-			☐	

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DRF = Drifter

Bottle Firing Method:

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DN = Down / No stop

Time Code:

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Notes:

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Month <u>Feb</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-01</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
68	P16	15	23:02	BE	ROS	US	49° 16.99	134° 40.04	3640		-		DY/TV	☒ ☐	Deep Cast
		16	00:30	BO			49° 16.99	134° 40.09			354-377	24		☐ ☐	PAR OFF
			02:09	EN			49° 17.07	134° 40.12			-			☐ ☐	P=3684 S=3637 D=3622 A=10
69	P16	16	03:11	BE	ROS	US	49° 16.99	134° 39.93	3635		-		DY/TV	☒ ☐	Cesium 500m
			03:23	BO			49° 17.00	134° 39.90		500	378-401	24		☐ ☐	
			03:39	EN			49° 17.03	134° 40.08			-			☐ ☐	
70	P16	16	04:03	BE	ROS	US	49° 17.01	134° 39.96	3635		-		DY/TV	☒ ☐	Cesium to 150m
			04:08	BO			49° 17.00	134° 39.98		150	402-425	24		☐ ☐	
			04:16	EN			49° 16.99	134° 40.07			-			☐ ☐	
71	P16	16	04:30		DRF	DE	49° 16.91	134° 39.69			-			☐ ☐	Argo 439
72	P15	16	08:32	BE	ROS	US	49° 12.04	133° 39.98	2410		426-	1	MB	☒ ☐	PAR BACK ON.
			09:13	BO			49° 12.05	133° 39.92		2005	-			☐ ☐	
			09:54	EN			49° 12.05	133° 39.94			-			☐ ☐	
73	P14	16	13:57	BE	ROS	US	49° 7.30	132° 40.03	3317		427-	1	MB	☒ ☐	
			14:32	BO			49° 07.28	132° 40.09		2005	-			☐ ☐	
			15:10	EN			49° 7.27	132° 40.07			-			☐ ☐	
74	P13	16	19:20	BE	ROS	US	49° 2.49	131° 39.97	3014		428-	1	MB	☒ ☐	
			19:55	BO			49° 2.49	131° 39.96		2005	-			☐ ☐	Tripped 2 bottles
			20:35	EN			49° 2.49	131° 39.96			-			☐ ☐	

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Bottle Firing Method:

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Notes:

Time Code:

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Over shot to ~ 2015 before coming back to 5 m.

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Month <u>February</u>				Year <u>2017</u>		Vessel <u>Tully</u>				Cruise ID <u>2017-01</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
75	P12	17	00:43	BE	ROS	US	48° 58.19	130° 40.00	3236		-		DY/TU	☒ ☐	DMS + UVic
			00:51	BO			48° 58.19	130° 40.00		300	429-444	16		☐ ☐	
			01:14	EN			48° 58.19	130° 40.00			-			☐ ☐	
76	P12	17	00:45	BE	LOOP		48° 58.19	130° 40.01	3236		-			☐ ☐	Cesium Loop
77	P12	17	02:05	BE	ROS	US	48° 58.20	130° 40.01	3236		445-467	23	MA/DY	☒ ☐	PAR OFF
			03:17	BO			48° 58.20	130° 40.00			-			☐ ☐	DEEP CAST + LOOP 2017 13AL 1NLT
			04:49	EN			48° 58.20	130° 40.00			-			☐ ☐	P 3272 = 3236 D 3220 A 10
78	P12	17	05:39	BE	NET		48° 58.1709	130° 40.9274	3236		-			☐ ☐	Bouge to 250m
			05:51	BO			48° 58.1708	130° 40.9266		250	-			☐ ☐	
			05:59	EN			48° 58.1705	130° 40.9251			-			☐ ☐	
79	P12	17	06:03	BE	NET		48° 58.1718	130° 40.9288	3235		-			☐ ☐	Bouge to 1200
			07:08	BO			48° 58.17	130° 40.93		1200	-			☐ ☐	Big swell, pumping
			07:37	EN			48° 58.1708	130° 40.9244			-			☐ ☐	
80	P12	17	07:49	BE	NET		48° 58.1709	130° 40.9265	3235		-			☐ ☐	Eugen ²⁵⁰ - white net
			07:58	BO			48° 58.1708	130° 40.9253		250	-			☐ ☐	
			08:02	EN			48° 58.1702	130° 40.9247			-			☐ ☐	
81	P12	17	08:21	BE	ROS	US	48° 58.17	130° 39.93	3234		468-483	16	MB	☒ ☐	USE Cast
			08:55	BO			48° 58.17	130° 39.92		2000	-			☐ ☐	
			09:31	EN			48° 58.17	130° 39.93			-			☐ ☐	

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 DRF = Drifter
 _____ = _____

Bottle Firing Method:

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 UN = Up / No stop
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Notes:

Time Code:

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Pump head off ~ 400-800 on down cast, head back on.

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Month <u>February</u>			Year <u>2017</u>			Vessel <u>JP Tully</u>			Cruise ID <u>2017-01</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
82	P11	17	11:37	BC	ROS	US	48°56.06	130°10.06	2786		484 -	1	MB	☒	
			12:20	BO			48°56.04	130°16.11		2005	-			☐	
			13:01	CU			48°56.04	130°16.22			-			☐	
83	P10	17	15:08	BC	ROS	US	48°53.58	129°40.02	2639		485-508	24		☒	Shallow CS
			15:11	BO			48°53.59	129°40.07		200	-			☐	
			15:19	CU			48°53.59	129°40.09			-			☐	
84	P10	17	15:37	BC	ROS	US	48°53.61	129°40.06	2640		509-532	24	MB	☒	IPS Regular + 500m CS
			16:12	BO			48°53.61	129°40.10		2005	-			☐	
			16:53	CU			48°53.60	129°40.20			-			☐	
85	P7	17	18:58	BC	ROS	US	48°51.39	129°10.01	2350		533 -	1	MB	☒	
			19:38	BO			48°51.36	129°10.09		2005	-			☐	
			20:21	CU			48°51.39	129°10.08			-			☐	
86	P8	17	22:27	BE	Net		48°48.9518	128°40.1617	2526		-		DY/TV	☐	Bongo 250m
			22:40	BO			48°48.98	128°40.18		250	-			☐	
			22:46	EN			48°48.9848	128°40.1891			-			☐	
87	P8	17	22:25		LOOP		48°48.9580	128°40.1170	2526		-			☐	60L LOOP
88	P8	17	22:51	BE	NET	-	48°48.99	128°40.18	2517		- - -	-	DY	☐	Bongo
			23:49	BO			48°48.99	128°40.21		1200	-			☐	
			00:18	EN			48°48.98	128°40.22			-			☐	

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DRF = Drifter

Bottle Firing Method:

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

Time Code:

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

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

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Notes:

Pump Turned off @ ~350 → 500 on way down, turned back on.
- New log yard on north 10, since it was a little long and bottom not opening very much.

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Month <u>FEBRUARY</u>			Year <u>2017</u>			Vessel <u>SP TULLY</u>			Cruise ID <u>2017-01</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
89	P8	18	00:37	BE	NET	-	48°49.00	128°40.21	2517		- - -	-	DY	☐ ☐	Evgeny net
			00:51	BO			48°49.02	128°40.20		250	-			☐ ☐	
			00:56	EN			48°49.03	128°40.20			-			☐ ☐	
90	P8	18	01:11	BE	ROS	US	48°49.03	128°40.20	2517		-		DY	☒ ☐	
			01:50	BO			48°49.10	128°40.20		2000	554-557	24		☐ ☐	
			02:57	EN			48°49.02	128°40.29			-			☐ ☐	
91	P8	18	03:06	DE	DRF		48°49.00	128°40.12			-			☐ ☐	Argo #438
92	P7	18	05:09	BE	ROS	US	48°46.68	128°9.91	2502		-		DY	☒ ☐	
			05:49	BO			48°46.67	128°9.90		2005	558	1		☐ ☐	
			06:30	EN			48°46.66	128°9.95			-			☐ ☐	
93	P6	18	08:25	BE	ROS	US	48°44.64	127°39.96	2541		559-	1	MS	☒ ☐	
			09:08	BO			48°44.6	127°39.75		2630	-			☐ ☐	
			09:49	GN			48°44.62	127°39.93			-			☐ ☐	
94	P6	18	08:25	BE	Loop	-	48°44.64	127°39.96	2541		-	-	MS	☒ ☐	60L Loop C.
95	P5	18	11:42	BE	ROS	.	48°41.48	127°10.04	2086		560-	1		☒ ☐	
			12:15	BO			48°41.52	127°9.93		2085	-			☐ ☐	
			12:47	GN			48°41.46	127°9.98			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Bottle Firing Method:
 US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

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

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Month <u>FEBRUARY</u>			Year <u>2017</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2017-01</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
96	P5 → P4 North	18	15:17	Be	ROS	US	48° 50.82	126° 57.88	1312		-	-	MB	☒	CTD following glider
			15:41	BO			48° 50.81	126° 57.87		1367	-			☐	Record
			16:05	GN			48° 50.81	126° 57.85			-			☐	P=1383 A=10 D=1367 S=1368
97	P5 → P4 North	18	16:15	Be	NET	-	48° 50.84	126° 57.85	1369		-	-	MB	☐	Bottom Gillnet 250
			16:24	BO			48° 50.85	126° 57.94		250	-			☐	glider recovery
			16:28	GN			48° 50.87	126° 57.96			-			☐	
98	P4	18	18:28	Be	NET	-	48° 38.9571	126° 39.9558	1812		-	-	MB	☐	Don't 250
			18:36	BO			48° 38.0029	126° 39.9424		250	-			☐	P4 Recovery
			18:40	GN			48° 38.0104	126° 39.9453			-			☐	
99	P4	18	18:54	Be	ROS	US	48° 39.03	126° 39.91	1305		561-573	13	MB	☒	P4 deep Recovery
			19:17	BO			48° 39.03	126° 39.95		1311	-			☐	P=1311 S=1305 D=1297 A=10
			19:53	GN			48° 39.04	126° 40.13			-			☐	
100	P3	18	21:28		ROS	US	48° 37.49	126° 20.00	803 (744)		-		el	☒	Bottom coming
			21:47				48° 37.61	126° 20.02		740	574-	1		☐	up - no altitude
			22:06				48° 37.66	126° 20.06			-			☐	(side-lobe?)
101	P2	18	23:38		ROS	US	48° 35.99	126° 0.01	117		-		el	☒	DMS
			23:42				48° 35.99	125° 59.99		100	575-589	15		☐	
			23:57				48° 35.98	125° 59.90			-			☐	
102	P2		23:50		Loop		48° 35.98	126° 0.03			-			☐	Cesium

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

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Month <u>February</u>				Year <u>2017</u>		Vessel <u>Tully</u>				Cruise ID <u>2017-01</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
103	P2	19	00:09	BE	Net		48°36.01	125°59.82	117		-			☐ ☐	Bongo for 107
			00:16	BO			48°35.99	125°59.83		107	-			☐ ☐	
			00:18	EN			48°35.97	125°59.83			-			☐ ☐	
104	P2	19	00:30	BE	Net		48°35.94	125°59.87	117		-			☐ ☐	
			00:36	BO			48°35.92	125°59.90		107	-			☐ ☐	white Net 107
			00:39	EN			48°35.92	125°59.90			-			☐ ☐	
105	P2	19	00:54	BE	ROS	US	48°35.97	125°59.86	116		-		DY/TU	☒ ☐	Deep
			00:58	BO			48°35.96	125°59.87		106	590-597	8		☐ ☐	
			01:06	EN			48°35.93	125°59.87			-			☐ ☐	
106	P1	19	03:17	BE	ROS	US	48°34.56	125°30.01	113		-		DY/TU	☒ ☐	See error
			03:16	BO			48°34.57	125°30.01		101	598601	4		☐ ☐	→
			03:22	EN			48°34.58	125°30.00			-			☐ ☐	(near surface)
107	P1	19	03:14		LOOP		48°34.56	125°30.00	113		-			☐ ☐	Cesium
108	102	19	06:41	BE	Net	—	48°29.98	124°43.99	255		-			☐ ☐	Bongo
			06:50	BO			48°29.98	124°43.99		245	-			☐ ☐	
			06:55	EN			48°30.01	124°44.04			-			☐ ☐	
109	102	19	07:09	BE	ROS	US	48°30.00	124°44.14	256		-		DY/TU	☒ ☐	
			07:15	BO			48°30.00	124°44.09			602-615	14		☐ ☐	
			07:39	EN			48°29.92	124°44.14			-			☐ ☐	

Event Type:

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

Event Type:

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
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→ FF...FF Unsupported Modem Message 30 OD OA from SBE Carousel
→ pump turned off

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Month <u>FEBRUARY</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-01</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	JF2	19	11:09	BE	NET	—	48°17.93	123°59.93	187		— - —	—	MB	☐ ☐	Bongo
			11:16	BO			48°17.93	123°59.97		177	-			☐ ☐	
			11:19	EN			48°17.94	123°59.99			-			☐ ☐	
111	JF2	19	11:33	BE	ROS	US	48°17.90	124°0.05	187		616-627	12	MS	☒ ☐	
			11:36	BO			48°17.89	124°0.07		177	-			☐ ☐	
			11:50	EN			48°17.87	124°0.18			— - —	—		☐ ☐	Bongo
112	Haro59	19	16:47	BE	ROS	US	48°36.84	123°14.81	235		628-641	14	MS	☒ ☐	
			16:51	BO			48°36.84	123°14.81		229	-			☐ ☐	
			17:06	EN			48°36.97	123°14.94			-			☐ ☐	
113	Haro59	19	17:28	BE	NET	—	48°36.964	123°14.9094	286		-			☐ ☐	Bongo
			17:35	BO			48°36.9586	123°14.945		226	-			☐ ☐	
			17:40	EN			48°36.9952	123°14.9780			-			☐ ☐	
114	56	19	20:00	BE	ROS	US	48°46.24	123°1.77	223		-		DI/KV	☒ ☐	
			20:06	BO			48°46.24	123°1.78		220	462-455	14		☐ ☐	
			20:24	EN			48°46.25	123°1.81			-			☐ ☐	
115	416	19	21:33	BE	NET	—	48°51.38	123°10.84	183		-			☐ ☐	Bongo
			21:43	BO			48°51.37	123°10.73		177	-			☐ ☐	
			21:47	EN			48°51.29	123°10.68			-			☐ ☐	
			:				°	°			-			☐ ☐	

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

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Month			Year			Vessel			Cruise ID						
FÉVRIER			2017			TULLY			2017-01						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
116	46	19	22:01	BE	ROS	US	48° 51.32	123° 10.55	187		-		DY/TV	☒	
			22:06	BO			48° 51.21	123° 10.52		182	656-667	12		☐	
			22:21	EN			48° 51.06	123° 10.38			-			☐	
117	42	20	00:12	BE	Net		49° 01.77	123° 26.18	318		-			☐	Bongo to 312
			00:23	BO			49° 01.71	123° 26.20		312	-			☐	
			00:30	EN			49° 01.67	123° 26.25			-			☐	
118	42	20	00:40	BE	ROS	US	49° 1.68	123° 26.26	318		-		DY/TV	☒	
			00:48	DO			49° 1.72	123° 26.23		314	668-683	16		☐	
			01:09	EN			49° 1.75	123° 26.12			-			☐	
119	39	20	02:19	BE	ROS	US	49° 9.80	123° 33.06	374		-		DY/TV	☒	
			02:27	BO			49° 9.79	123° 33.06		369	684-700	17		☐	
			02:50	EN			49° 9.79	123° 33.04			-			☐	
120	GEO1	20	04:05	BE	ROS	US	49° 15.04	123° 44.96	398		-		DY/TV	☒	
			04:15	BO			49° 15.06	123° 44.96		395	701-711	11		☐	
			04:33	EN			49° 15.05	123° 44.93			-			☐	
121	GEO1	20	04:39	BE	Net	✓	49° 15.0686	123° 44.9204	398		-			☐	Bongo 50m
			04:41	BO			49° 15.0634	123° 44.9103		50	-			☐	
			04:43	EN			49° 15.0694	123° 44.9080			-			☐	
122	GEO1	20	04:	BE	Net	✓	° 15.0618	° 44.8927	398		-			☐	Bongo 400.

Event Type:

BOT = Bottle cast (no CTD)
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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

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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Month <u>February</u>			Year <u>2017</u>			Vessel <u>JP Tully</u>			Cruise ID <u>2017-01</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	GE01	20	05:01	BO	NET	✓	49° 15.0461	123° 44.9123			-			☐	Bongo
			05:13	EN			49° 15.04	123° 44.90		393	-			☐	
123	27	20	05:50	BE	NET	—	49° 19.11	123° 48.04	344		-			☐	Bongo
			06:01	BO			49° 19.11	123° 48.03		338	-			☐	
			06:09	EN			49° 19.12	123° 48.01			-			☐	
124	27	20	06:19	BE	ROS	US	49° 19.12	123° 48.01	346		-		dyfu	☒	
			06:27	BO			49° 19.11	123° 48.03		340	712-727	16		☐	
			06:49	EN			49° 19.13	123° 47.99			-			☐	
125	2	20	08:32	BE	ROS	US	49° 24.10	124° 9.33	277		728-742	15	MB	☒	
			08:39	BO			49° 24.07	124° 9.31		275	-			☐	
			08:56	EN			49° 24.06	124° 9.16			-			☐	
126	CPF2	20	10:33	BE	NET	—	49° 28.00	123° 30.00	326		— — —	—	MB	☐	Bongo
			10:43	BO			49° 28.00	124° 30.00		315	-			☐	
			10:48	EN			49° 28.00	124° 29.99			-			☐	
127	CPF2	20	11:01	BE	ROS	US	49° 27.98	124° 29.97	351		743-755	13	MB	☒	
			11:09	BO			49° 27.96	124° 30.03		319	-			☐	
			11:24	EN			49° 27.97	124° 30.11			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

Event Type:

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

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
— = —

Bottle Firing Method:

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

Time Code:

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

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:

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Month				Year			Vessel				Cruise ID					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
128	12	20	13:20	BE	NET	—	49°43.61	124°40.89	353		— — —	—	MB	☐ ☐	Bongo	
			13:30	BO			49°43.65	124°41.08	343	343	-			☐ ☐		
			13:37	EN			49°43.66	124°41.14			-			☐ ☐		
129	12	20	13:51	BE	ROS	US	49°43.80	124°41.09	354		756-771	16	MB	☒ ☐		
			13:58	BO			49°43.77	124°41.14			-			☐ ☐		
			14:16	EN			49°43.85	124°41.12			-			☐ ☐		
130	SGN	20	15:26	BE	ROS	US	49°49.96	124°51.84	335		-	-	MB	☒ ☐	2 cables off	
			15:32	BO			49°49.96	124°51.88		332	-			☐ ☐		
			15:40	EN			49°49.99	124°51.89			-			☐ ☐		
131	14	20	16:25	BE	NET	-	49°53.02	124°59.63	318		-	-	MB	☐ ☐	Bongo	
			16:34	BO			49°53.09	124°59.65		303	-			☐ ☐		
			16:40	EN			49°53.13	124°59.67			-			☐ ☐		
132	14	20	16:53	BE	ROS	US	49°53.15	124°59.73	313		772-786	15	MB	☒ ☐		
			17:00	BO			49°53.14	124°59.71		310	-			☐ ☐		
			17:20	EN			49°53.06	124°59.47			-			☐ ☐		
133	BS11	20	21:44	BE	ROS	US	49°29.01	124°46.00	62		-		DY	☒ ☐		
			21:47	BO			49°29.01	124°46.00			787-793	7		☐ ☐		
			21:54	EN			49°28.99	124°46.01			-			☐ ☐		
			:				.	.			-			☐ ☐		

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
 BO = Bottom Time of Cast
 EN = End Time of Cast
 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:

Pump OFF @ ~ 315, Turned back on immediately.

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Month <u>February</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-01</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
134	CPF1	21	01:46	BE	ROS	US	49° 21.94	124° 5.03	240		-		DY/TV	☒	
			01:50	BO			49° 21.95	124° 5.04		234	-	—		☐	
			01:54	EN			49° 21.95	124° 5.05			-			☐	
135	CPF1	21	02:04	BE	NET	/	49° 21.938	124° 05.0980	242		-			☐	
			02:12	BO			49° 21.9292	124° 05.1283		237	-			☐	
			02:19	EN			49° 21.9175	124° 05.1723			-			☐	
136	ST03	21	12:32	BE	ROS	US	48° 35.57	123° 30.05	226		74-805	12	MB	☒	
			12:37	BO			48° 35.57	123° 30.08		12	-			☐	
			12:54	EN			48° 35.58	123° 30.11			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

Event Type:

BOT = Bottle cast (no CTD)
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