

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2018-26

DATE:

From: 5 JUNE 2018 To: 19 JUNE 2018

VESSEL:

JOHN P TULLY

PROJECT(S):

LINE P

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: 443

Primary temperature serial number: 4484

Primary conductivity serial number: 2128

Secondary temperature serial number: 4752

Secondary conductivity serial number: 2398

Transmissometer: Wetlabs Model: C-Star s/n: 11850R

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 8x s/n: 3641 P, S or NO pump? S

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

Oxygen sensor: SBE Model: 43 s/n: 0997 P, S or NO pump? S

PAR sensor: Biospherical 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: _____
Volume of bottles (litres): 10

Winches:

1. Make: HAWBOLT Model: _____ Serial #: 17026 Used for: MPS
2. Make: HAWBOLT Model: _____ Serial #: 17027 Used for: CTD
3. Make: SWAN Model: 329 Serial #: 1482 Used for: BONGOS

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

HAWBOLT 17026 - USED BOLT FOR BOLTEST WITH LOCKING NUT

Salinometer:

Make: Seaman Model: _____ Serial Number: _____

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

Oxygen Kit(s):

Make: DOSIMAT 865-3 Model: #19 Kit Number: #2 OUTSIDE
Make: DOSIMAT 876-3 Model: #21 Kit Number: #2 INSIDE

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

Thermosalinograph System (SBE21):

Program: SCS Version: SBE25
Sampling interval (seconds): 5
Fluorometer sensor serial number: 953

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

SBE38 CEA AND A BIT. SBE25 Wrote in PROCESS

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: _____		Name: _____	Exit points: _____
Buffer (bytes): _____		Work File: _____	
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 All GOOD EXCEPT MISSED 11

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 JUNE				Year 2018			Vessel TULLY			Cruise ID 2018 - 26					
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							
1	SI	6	16:26	BE	ROS	US	48° 39. 52	123° 29. 88	164		—	24	H.M.	☒	NO RBR
			16:29	BO			48° 39. 54	123° 29. 89		157	-			☐	PAR ON
			16:32	EN			48° 39. 53	123° 29. 87			-			☐	
2	HAROS9	6	18:36	BE	ROS		48° 36. 85	123° 14. 80	231		1 - 14	14	H.M.	☒	—
			18:40	BO			48° 36. 81	123° 14. 78		229	-			☐	RBR ON
			18:59	EN			48° 36. 77	123° 14. 85			-			☐	#66089
3	HAROS9	6	19:09	BE	NET		48° 36. 83	123° 14. 89	235		-			☐	
			19:18	BO			48° 36. 82	123° 14. 89			-			☐	
			19:24	EN			48° 36. 83	123° 14. 89			-			☐	
4	JF1	6	23:16	BE	LOOP	UN	48° 15. 88	123° 29. 97	147	4.5	5004	—	MG	☐	ISAL 2CHL 1AUT
5	JF2	7	01:30	BE	ROS	US	48° 18. 01	123° 59. 62	184		-			☐	CALLED HARO IN HBR
			01:35	BO			48° 18. 02	123° 55. 55		181	15 - 25	11		☐	RBR ON #66081
			01:41	EN			48° 17. 93	123° 59. 42			-			☐	OFF
6	JF2	7	01:56	BE	NET		48° 17. 82	123° 59. 30	185		-		MG	☐	
			02:02	BO			48° 17. 85	123° 59. 21		175	-			☐	
			02:05	EN			48° 17. 88	123° 59. 18			-			☐	
7	JF3	7	05:07	BE	LOOP		48° 27. 02	124° 30. 06	223	4.5	5007		MG	☐	ISAL 2CHL 1AUT
8	JF4	7	07:07	BE	LOOP		48° 32. 27	124° 58. 54	55.1		5008			☐	
			:				°	°			-			☐	

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

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

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This page is for any notes or observations

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LENGTHENED TOP LOOP ON BOTTLE 11

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							Latitude	Longitude							
9	P1	7	09:36	BC	ROS	U.S.	48° 34. 44	125° 30. 06	135		26 - 29	4	H.M.	☒ ☐	2018-26-0006
			09:38	BO			48° 34. 45	125° 30. 07		131	-			☐ ☐	Should be 0009
			09:44	EN			48° 34. 44	125° 30. 08			-			☐ ☐	RBR 66089
10	P2	7	12:09	BC	ROS		48° 36. 00	126° 00. 03	116		30 - 37	8	H.M.	☒ ☐	
			12:12	BO			48° 36. 00	126° 00. 01		107	-			☐ ☐	
			12:22	EN			48° 35. 96	126° 00. 01			-			☐ ☐	
11	P2	7	:	DN	Loop	Cesium	48° 35. 96	125° 59. 98			-	11	R.M.	☐ ☐	Cesium
12	P2	7	12:39	BO	NET		48° 35. 97	125° 59. 92	116		-		H.M.	☐ ☐	BONGO
			12:40	EN			48° 39. 98	125° 59. 90		105	-			☐ ☐	
13	P2	7	12:50	BO	NET		48° 39. 98	125° 59. 90			-		H.M.	☐ ☐	RING NET
			12:52	EN			48° 39. 98	125° 59. 90			-			☐ ☐	
14	P2	7	13:18	BC	ROS	U.S.	48° 36. 00	125° 59. 94	116		38 - 51	14	H.M.	☒ ☐	DMS CAST
			13:20	BO			48° 35. 99	125° 59. 93		100	-			☐ ☐	RBR 66089
			13:33	EN			48° 36. 00	125° 59. 91			-			☐ ☐	
15	P3	7	15:10	BC	ROS	U.S.	48° 37. 57	126° 20. 10	770		52-	1	H.M.	☒ ☐	RBR 66089 on
			15:25	BO			48° 37. 57	126° 20. 11		792	-			☐ ☐	* 60672 on
			:	EN			48° 37. 59	126° 20. 11			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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16	P4	7	17:32	BE	ROS	U.S.	48° 39.03	126° 39.98	1313		53-72	20	H.M.	☒ ☐	2x RBR 60672 60668 ON
			17:37	BO			48° 39.03	126° 39.99		300	-			☐ ☐	
			17:39	EN			48° 39.04	126° 39.99			-			☐ ☐	
17	P4	7	18:09	BE	NET	-	48° 39.01	126° 39.94	1307		-		H.M.	☐ ☐	BONGO
			18:18	BO			48° 39.01	126° 39.96		250	-			☐ ☐	
			18:23	EN			48° 39.00	126° 39.96			-			☐ ☐	
18	P4	7	18:33	BE	NET	-	48° 39.00	126° 39.92	1308		-		MG	☐ ☐	RING
			18:42	BO			48° 39.02	126° 39.94		250	-			☐ ☐	
			18:47	EN			48° 39.02	126° 39.95			-			☐ ☐	
19	P4	7	19:07	BE	Net		48° 39.07	126° 40.01	1307		-		MG	☐ ☐	Bongo
			19:48	BO			48° 39.03	126° 40.29		1200	-			☐ ☐	
			20:08	EN			48° 38.96	126° 40.43			-			☐ ☐	
20	P4	7	21:24	BE	ROS	US	48° 39.00	126° 39.99	1314		73-91	19	MG	☒ ☐	RBR on / OFF
			21:47	BO			48° 39.02	126° 40.01		1320	-			☐ ☐	1306 ON DEPTH
			22:33	EN			48° 39.01	126° 40.04			-			☐ ☐	2210 SHUT DOWN RBR SYSTEM
21	P4	7	23:40	BE	ROS	US	48° 38.99	126° 39.98	1316		92-115	24		☒ ☐	BACK ON 2232
			23:43	BO			48° 38.99	126° 40.00		150	-			☐ ☐	CESIUM 150
			23:51	EN			48° 38.99	126° 40.01			-			☐ ☐	RBR on / OFF
			:				.	.			-			☐ ☐	

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VALVE STEM LEAKING WATER IN WET LAB
REPAIRS TO SALT WATER SYSTEM

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22	P4	7	00:19	BE	ROS	US	48° 38.99	126° 40.02	1320		116 - 139	24	MG	☒ ☐	RBR ON / OFF
			00:27	BO			48° 38.99	126° 40.04		500	-			☐ ☐	Cesium 500
			00:40	EN			48° 38.98	126° 40.07			-			☐ ☐	
23	P4	8	01:55	BE	ROS	US	48° 38.99	126° 40.01	1315		140 - 155	16	MG	☒ ☐	RBR ON / OFF
			02:19	BO			48° 38.96	126° 39.91		1320	-			☐ ☐	UBC east
			02:46	EN			48° 38.97	126° 39.92			-			☐ ☐	
24	P5	8	05:25	BE	ROS	US	48° 41.56	127° 10.07	2082		-		MG	☒ ☐	RBR ON / OFF
			05:59	BO			48° 41.54	127° 10.07		2005	156	1		☐ ☐	
			06:32	EN			48° 41.54	127° 09.88			-			☐ ☐	
25	P6	8	09:02	BE	Loop	-	48° 44.66	127° 39.97	Loop		✓	3	H.M.	☐ ☐	Cesium Loop
26	P6	8	09:02	BE	ROS	U.S.	48° 44.66	127° 39.96	2540		157	1	H.M.	☒ ☐	RBR'S ON/OFF
			09:35	BO			48° 44.59	127° 39.96		2005	-			☐ ☐	
			10:08	EN			48° 44.57	127° 39.92			-			☐ ☐	
27	P7	8	12:38	BE	ROS	U.S.	48° 46.61	128° 09.94	2501		158 -	1	H.M.	☐ ☐	RBR'S ON/OFF
			13:12	BO			48° 46.61	128° 09.93		2005	-			☐ ☐	SPIKE IN SAC JUST BELOW 1300 f
			:	EN			48° 46.58	128° 09.91			-			☐ ☐	
28	P8	8	16:12	BE	NET	-	48° 48.96	128° 39.98	2515		-			☐ ☐	ring Net
			16:21	BO			48° 48.95	128° 40.02		250	-			☐ ☐	
			16:27	EN			48° 48.93	128° 40.02			-			☐ ☐	

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29	P8	8	16:37	BE	NET		48°49.60	128°40.03	2515		—	—	H.M.	☐ ☐	1200 BONGO
			17:18	BO			48°49.00	128°40.03		1200	-			☐ ☐	
			17:37	EN			48°49.00	128°40.05			-			☐ ☐	
30	P8	8	17:44	BE	NET		48°49.04	128°40.11	2515		-	—	H.M.	☐ ☐	250 BONGO
			17:52	BO			48°49.02	128°40.13		250	-			☐ ☐	
			17:56	EN			48°49.00	128°40.15			-			☐ ☐	
31	P8	8	18:08	BE	ROS	U.S.	48°49.00	128°40.01	2515		159 - 182	24	H.M.	☒ ☐	2005 ROSETTE
			18:41	BO			48°49.00	128°40.05		2005	-			☐ ☐	ISAL INUT BATH LOGS
			19:41	EN			48°48.94	128°39.76			-			☐ ☐	RBR ON / OFF
32	P9	8	22:14	BE	ROS	US	48°51.40	129°10.00	2335		183 -	—	MG	☒ ☐	PUMP OFF RETURN
			22:17	BO			48°51.40	129°9.99		186	-			☐ ☐	
			20:20	EN			48°51.38	129°9.96			-			☐ ☐	
33	P9	8	22:23	BE	ROS	US	48°51.37	129°9.92	2337		-			☐ ☐	REDO
			22:56	BO			48°51.41	129°09.96		2005	183 -	1	MG	☒ ☐	
			23:31	EN			48°51.30	129°09.89			-			☐ ☐	
34	P9	8	23:39	DE	ARGO		48°51.31	129°09.95	2337		-			☐ ☐	S/N 543
35	P10	8	02:15	BE	ROS	US	48°53.52	129°39.81	2643		184 - 207	24	MG	☒ ☐	CESIUM 200
			02:18	BO			48°53.51	129°39.81		200	-			☐ ☐	RBR ON / OFF
			02:25	EN			48°53.51	129°39.80			-			☐ ☐	

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- PRIMARY CONDUCTIVITY CELL FLUSHED

NEW SPRING REPLACES SILICON TUBING IN NISKIN 18

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36	P10	9	02:50	BE	ROS	US	48° 53.56	129° 39.88	2642		208 - 231	24	MG	☒ ☐	CESIUM 500 PLUS
			03:23	BO			48° 53.51	129° 39.87		2005	-			☐ ☐	RBR ON / OFF
			04:02	EN			48° 53.49	129° 39.86			-			☐ ☐	
37	P11	9	06:39	BE	ROS	US	48° 56.02	130° 10.03	2751		232 -	1	MG	☒ ☐	RBR ON / OFF
			07:12	BO			48° 56.03	130° 10.06		2005	-			☐ ☐	60672 60668 OFF
			07:45	EN			48° 55.96	130° 09.96			-			☐ ☐	
38	P12	9	10:25	BE	ROS		48° 58.23	130° 40.02	3030 3238		233 - 248	16	HM	☐ ☐	UBC CAST
			10:59	BO			48° 58.13	130° 39.91		2005	-			☐ ☐	PAR OFF
			11:36	EN			48° 58.20	130° 40.00			-			☐ ☐	RBR'S ON ⁶⁰⁶⁶³ 60666 / OFF
39	P12	9	11:47	BE	NET		48° 58.20	130° 39.88	3030 3238		-		HM	☐ ☐	BONAO 250m
			11:57	BO			48° 58.19	130° 39.93			-			☐ ☐	
			12:01	EN			48° 58.17	130° 39.90			-			☐ ☐	
40	P12	9	12:08	BE	NET		48° 58.17	130° 39.91	3238		-		HM	☐ ☐	1200m Bongo
			12:56	BO			48° 58.18	130° 40.18		1200	-			☐ ☐	
			13:16	EN			48° 58.21	130° 40.31			-			☐ ☐	
41	P12	9	13:19	BE	NET		48° 58.23	130° 39.94	3238		-		HM/TV	☐ ☐	Rings Net
			13:28	BO			48° 58.23	130° 39.95		250	-			☐ ☐	
			13:32	EN			48° 58.22	130° 39.98			-			☐ ☐	
42	P12	9	10:25	BE	LOOP		48° 58.23	130° 40.02	3233 LOOP		-			☐ ☐	Cesium Loop.

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Bottom depth detection off-corrected

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Month JUN				Year 2018			Vessel TULLY				Cruise ID		2018-26			
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	P12	9	13:45	BE	ROS	US	48° 58. 20	130° 39. 94	3233		249 - 271	23	HA/HM	☒ ☐	PAR OFF DEEP CAST →	
			14:39	BO			48° 58. 22	130° 40. 00		3274	-			☐ ☐	S 3235 P 3274 A114 D 3222	
			16:00	EN			48° 58. 25	130° 40. 00			-			☐ ☐	RBR 60663 60666 ON/	
44	P12	9	17:19	BE	ROS	U.S.	48° 58. 19	130° 39. 98	3235		272 - 298	17	H.M	☒ ☐	DMS CAST	
			17:25	BO			48° 58. 21	130° 40. 00		300	-			☐ ☐	PAR-ON	
			17:44	EN			48° 58. 19	130° 40. 02			-			☐ ☐	RBR ON/OFF	
45	P13	9	22:26	BE	ROS	US	49° 02. 63	131° 39. 94	3005		289 -	1	MG	☒ ☐	RBR 68/72 ON 1 OF	
			23:00	BO			49° 02. 63	131° 39. 97		2005	-			☐ ☐		
			23:33	EN			49° 02. 65	131° 39. 98			-			☐ ☐		
46	P14	10	04:44	BE	ROS	US	49° 07. 34	132° 39. 94	3318		290 - 313	24	MG	☒ ☐	PAR OFF	
			05:40	BO			49° 07. 28	132° 39. 83		3361	-			☐ ☐	RBR 63/66 ON/OFF	
			06:59	EN			49° 07. 30	132° 39. 85			-			☐ ☐	S 3319 P 3361 A10.09 D 3306	
47	P14	10	07:13	BE	DRF	—	49° 07. 39	132° 40. 42	3318	—	—		L.M.	☐ ☐	DRF # 542	
48	P15	10	11:53	BE	ROS	U.S.	49° 11. 96	133° 39. 98	3407		314 -	1	H.M	☒ ☐	PAR ON	
			12:28	BO			49° 11. 98	133° 39. 93		2005	-			☐ ☐	RBR 68/72 ON/OFF	
			13:01	EN			49° 11. 96	133° 40. 00			-			☐ ☐		
49	P16	10	17:43	BE	ROS	U.S.	49° 16. 98	134° 39. 94	3634		315 - 331	17		☒ ☐	DMS CAST	
			17:48	BO			49° 16. 98	134° 39. 95		300	-			☐ ☐	RBR'S 63/66 ON/OFF	
			18:01	EN			49° 16. 98	134° 39. 98			-			☐ ☐		

Event Type:

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ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
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Bottle Firing Method:

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

Notes:

Time Code:

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— BOTH 2000 ~ RBR'S DOWNLOADED

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Month				Year			Vessel			Cruise ID					
JUNE				2018			TULLY			2018-26					
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
50	P16	10	18:15	BE	NET	-	49° 16.98	134° 39.99	3635		-		HR	☐ ☐	BUNGO
			18:23	BO			49° 16.98	134° 40.01		250	-			☐ ☐	
			18:27	EN			49° 16.99	134° 40.02			-			☐ ☐	
51	P16	10	18:36	BE	NET	-	49° 16.96	134° 40.06			-			☐ ☐	
			18:45	BO			49° 16.96	134° 40.07	3634		-			☐ ☐	Ring
			18:49	EN			49° 16.97	134° 40.04		250	-			☐ ☐	
52	P16	10	19:05	BE	ROS	US	49° 16.97	134° 40.14	3635		332 - 355	24	MR/MG	☒ ☐	RBL ON/OFF 63/66 PAR OFF
			20:07	BO			49° 17.02	134° 40.12		3686	-			☐ ☐	S 3634 P 3685 A 9.5 D 3622
			21:26	EN			49° 17.07	134° 40.10			-			☐ ☐	LOOPS 15AL 1NU
53	P16	10	22:26	BE	NET	UN	49° 17.01	134° 40.02	3633		-			☐ ☐	MPS 2000m
			23:54	BO			49° 16.99	134° 40.12		2005	-			☐ ☐	
		11	24:32	EN			49° 16.99	134° 40.12			-			☐ ☐	
54	P16	11	00:57	BE	ROS	US	49° 17.02	134° 40.09	3633		356 - 379	24	MR	☒ ☐	PAR ON RBL ON/OFF 63/66 → A LONG TIME ON/DRK
			01:00	BO			49° 17.02	134° 40.09		150	-			☐ ☐	
			01:07	EN			49° 17.04	134° 40.10			-			☐ ☐	
55	P16	11	01:28	BE	ROS	US	49° 17.05	134° 40.12	3633		380 - 403	24	MG	☒ ☐	RBL ON/OFF 63/66
			01:37	BO			49° 17.06	134° 40.08		500	-			☐ ☐	
			01:50	EN			49° 17.06	134° 40.09			-			☐ ☐	
			:				°	°			-			☐ ☐	SWITCH RRRS 66/72

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Month <u>JUNE</u>				Year <u>2018</u>			Vessel <u>TULLY</u>			Cruise ID <u>2018-26</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
56	P17	11	05:33	BE	ROS	US	49° 21.05	135° 39.96	3644		404	1	MG	☒ ☐	RBR 68/72 ON/OFF
			06:06	BO			49° 21.02	135° 39.80		2005	-			☐ ☐	
			06:37	EN			49° 20.97	135° 39.70			-			☐ ☐	
57	P18	11	10:25	BE	Loop	—	49° 26.03	136° 40.06			-		R.N.	☐ ☐	Cesium Loop
58	P18	11	10:03	BE	ROS	US	49° 26.03	136° 40.06	3835	3	405-428	24	H.N.	☒ ☐	PAR OFF
			11:11	BO			49° 26.03	136° 39.94			-			☐ ☐	63/66 GN/OFF
			12:35	EN			49° 26.10	136° 40.00			-			☐ ☐	S 3834 P 3891 A 10.11 D 3820
59	P18	11	12:40	BE	DRi	—	49° 26.13	136° 40.00	—	—	-			☐ ☐	DRi #10
60	P19	11	16:11	BE	ROS	US	49° 30.04	137° 40.18	3927		429-	1	HM	☒ ☐	PAR ON
			16:45	BO			49° 29.99	137° 40.22		2005	-			☐ ☐	RBR 68/72 ON/OFF
			17:18	EN			49° 29.96	137° 40.13			-			☐ ☐	
61	P20	11	21:09	BE	ROS	US	49° 34.02	138° 40.24	3965		430-446	17	MG	☐ ☐	RBR 63/66 ON/OFF
			21:17	BO			49° 34.11	138° 40.17		300	-			☐ ☐	N 20 SEC Stop @ 218 for wire L°
			21:37	EN			49° 34.07	138° 40.26			-			☐ ☐	DMS Cast
62	P20	11	22:15	BE	ROS	US	49° 34.03	138° 40.05	3965		447-470	24	MR/MG	☒ ☐	PAR OFF
			23:28	BO			49° 34.02	138° 40.10		4025	-			☐ ☐	S 3963 P 4025 A 9.96 D 3953
		12	00:54	EN			49° 34.08	138° 40.03			-			☐ ☐	RBR 63/66 ON/OFF
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>June</u>			Year <u>2018</u>			Vessel <u>TULLY</u>			Cruise ID <u>2018-26</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
63	P20	12	2:20	BE	NET	/	49° 34.04	138° 39.98			-		MG	☐ ☐	RING
			2:30	BO			49° 33.98	138° 39.99		250	-			☐ ☐	
			2:34	EN			49° 33.96	138° 39.99			-			☐ ☐	
64	P20	12	2:42	BE	NET	/	49° 33.91	138° 40.05			-		MG	☐ ☐	Bongo
			2:52	BO			49° 33.84	138° 40.09		250	-			☐ ☐	
			2:56	EN			49° 33.80	138° 40.08			-			☐ ☐	
65	P20	12	3:04	BE	Net	/	49° 33.78	138° 40.20		1200	-			☐ ☐	Bongo
			3:49	BO			49° 33.60	138° 40.32			-			☐ ☐	1200
			4:10	EN			49° 33.45	138° 40.50			-			☐ ☐	
66	PZ1	12	08:04	BE	ROS	US	49° 38.00	139° 40.10	3959		471 - 494	24	H.M.	☒ ☐	RBR 68/72 ON PAR ON
			08:08	BO			49° 38.00	139° 40.09		200	-			☐ ☐	CESION EAST SHORE
			08:16	EN			49° 37.99	139° 40.10			-			☐ ☐	NO RBR'S (FORGOT)
67	PZ1	12	08:42	BE	ROS	U.S.	49° 37.99	139° 39.94	3959		495 - 518	24	H.M.	☒ ☐	RBR'S ON/OFF
			09:16	BO			49° 37.93	139° 39.87		2005	-			☐ ☐	CESION DEEP + 105
			09:55	EN			49° 37.96	139° 39.87			-			☐ ☐	
68	PZ2	12	13:29	BE	ROS	U.S.	49° 42.01	140° 39.95	3940		519 - 542	24	H.M.	☐ ☒	RBR 63/66 ON/OFF
			14:36	BO			49° 41.98	140° 39.96			-			☐ ☐	PAA OFF
			16:07	EN			49° 41.96	140° 39.80			-			☐ ☐	S 3933 P 3990 A 9.72 D 3919
			:				.	.			-			☐ ☐	

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Month <u>June</u>				Year <u>2018</u>			Vessel <u>TULLY</u>			Cruise ID <u>2018-26</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
69	P23	12	20:01	BE	ROS	US	49° 46.11	141° 39.88	4052		543-	1	MG	☒	PAR ON
			20:32	BO			49° 46.05	141° 39.93		2005	-			☐	RBR 68/72 ON / OFF
			21:05	EN			49° 45.99	141° 39.94			-			☐	
70	P23	12	20:02	BE	LOOP	—	49° 46.11	141° 39.88	4052	4.5	—	—	RN	☐	CESIUM LOOP
71		12	21:51	BE	LOOP	—	49° 46.79	141° 51.68		4.5	5071	—	MG	☐	1 INUT 1 SAL 2 CHL TRANSIT LOOP
72	P24	13	00:46	BE	ROS	US	49° 50.18	142° 40.00	3987		544-567	24	MG	☒	RBR 63/66 ON/OFF PAR OFF
			01:56	BO			49° 50.21	142° 40.13		4044	-			☐	S 3987 P 4044 A 394 D 3973
			03:27	EN			49° 50.38	142° 40.26			-			☐	
73	P24	13	00:48	BE	LOOP	—	49° 50.18	142° 40.00	3987	4.5	—	—	RN	☐	CESIUM LOOP
74	P25	13	07:03	BE	ROS	US	50° 00.06	143° 36.17	4140		568-	1	H.M	☒	RBR 68/72-OFF PAR ON ON-
			07:39	BO			49° 59.99	143° 36.26		2003	-			☐	
			08:13	EN			50° 00.03	143° 36.21			-			☐	
75	P35	13	10:52	BE	ROS	US	49° 59.99	144° 18.12	4150		569-	1	H.M	☒	RBR ON/
			11:27	BO			49° 59.98	144° 18.14		2005	-			☐	
			11:59	EN			49° 59.96	144° 18.16			-			☐	
76	P26	13	14:30	BE	ROS	US	50° 00.10	144° 59.95	4250		570-593	24	H.M	☒	PAR OFF
			15:43	BO			50° 00.03	144° 59.91		4317	-			☐	RBR 63/66 ON/OFF
			:	EN			°	°			-			☐	S 4250 P 4316 A 8.74 D 4237
			:				°	°			-			☐	

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Month <u>JUNE</u>			Year <u>2018</u>			Vessel <u>TULLY</u>			Cruise ID <u>2018-26</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
77	P26	13	16:57	BE	ROS	US	50° 00. 01	144° 59. 71	4250		—		H.M.	☐ ☐	BOT 10 ~ 24
			16:57	BO			50° 00. 01	144° 59. 71		921	-			☐ ☐	REBOOT
			17:26	EN			50° 00. 05	144° 59. 85			-			☐ ☐	RBR 6366
78	P26	13	17:35	BE	NET	—	50° 00. 04	144° 59. 86	4281		-		H.M.	☐ ☐	BONGO
			17:45	BO			50° 00. 04	144° 59. 91			-			☐ ☐	
			17:50	EN			50° 00. 02	144° 59. 94		250	-			☐ ☐	
79	P26	13	18:00	BE	NET		50° 00. 04	144° 59. 91			-			☐ ☐	RING NET
			18:09	BO			50° 00. 02	145° 00. 04			-			☐ ☐	
			18:13	EN			50° 00. 02	145° 00. 06		250	-			☐ ☐	
80	P26	13	18:35	BE	ROS	US	50° 00. 15	144° 59. 98	4250		594 - 617	24	H.M.	☐ ☒	CESIUM CAST
			18:38	BO			50° 00. 13	144° 59. 98		150	-			☐ ☐	RBR ON/OFF
			18:46	EN			50° 00. 11	145° 00. 05			-			☐ ☐	
81	P26	13	19:20	BE	ROS	US	50° 00. 11	145° 00. 03	4251		618 - 641	24	MG	☒ ☐	RBR ON RBR ON/OFF
			19:28	BO			50° 00. 16	145° 00. 00		500	-			☐ ☐	
			19:41	EN			50° 00. 16	145° 00. 05			-			☐ ☐	
82	P26	13	20:51	BE	NET		50° 00. 02	144° 59. 99	4252		-			☐ ☐	MPS
			22:44	BO			50° 00. 00	145° 00. 34		3005	-			☐ ☐	
			23:53	EN			49° 59. 90	145° 00. 05			-			☐ ☐	
			:				°	°			-			☐ ☐	

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BOTTLES CAPS JUST DON'T FIT RIGHT ALWAYS DRIPPING

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Month JUN				Year 2018			Vessel TULLY				Cruise ID 2018-26				
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
83	P26	14	00:12	BE	ROS	US	49°59.90	145°00.05	4250		642-661	20	MR	☒ ☐	RBR ON/OFF
			00:18	Bo			49°59.89	145°00.04		300	-			☐ ☐	DMS CAST
			00:37	EN			49°59.86	145°00.00			-			☐ ☐	
84	P26	14	01:23	BE	ROS	US	49°59.92	144°59.97	4250		662-677	16	MR	☒ ☐	RBR ON/
			01:57	Bo			49°59.91	144°59.98		2005	-			☐ ☐	UBC CAST
			02:35	EN			49°59.98	144°59.98			-			☐ ☐	
85	P26	14	02:58	BE	DRF	-	49°59.91	144°59.94	4250		-			☐ ☐	Argo #8 SIN
86	P26 ^{leaving} →	14	03:04	BE	NET	-	50°00.00	144°59.69	4250		-			☐ ☐	Neuston Surface tow
			03:20	EN			50°00.39	144°58.76		~5m surface	-			☐ ☐	
87	PA011	14	05:25	BE	ROS CTD	-	50°08.33	144°48.10	4211		---	Ø	MG	☒ ☐	RBR ON/OFF → IN REAR OF BUOY
			05:37	Bo			50°08.34	144°48.10		500	-	(24)		☐ ☐	CLOSE ALL BOTTLES AT SURFACE
			05:47	EN			50°08.33	144°48.02			-			☐ ☐	
88	PA-011	14	05:59	BE	NET		50°08.29	144°47.90	4211		-			☐ ☐	BOWG
			06:09	Bo			50°08.24	144°47.82		250	-			☐ ☐	
			06:14	EN			50°08.22	144°47.78			-			☐ ☐	
89	PA011		06:35	BE	NET		50°08.11	144°47.06	4211	~5m surface	-			☐ ☐	NEUSTON
			06:51	EN			50°08.02	144°46.05			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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STOPPED @ 267 TO ADJUST POSITIONING OF SHIP

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JUN</u>			Year <u>2018</u>			Vessel <u>TULLY</u>			Cruise ID <u>2018-26</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	P25 Loop	14	11:46	BE	Loop		50°01.69	143°36.19	4107		-		RL	☐ ☐	Csloop 60d
91	Loop 5091	14	13:52	BE	Loop	-	49°58.74	143°04.60	4086		5091-		HM	☐ ☐	1xSAL 2xCHL
92	Loop 5092	14	20:14	BE	Loop	-	49°53.11	141°35.73	4048		5092-		MG	☐ ☐	1xSAL 2xCHL
93	Loop 5093	15	05:50	BE	Loop		49°42.50	139°25.57	3941		5093		MG	☐ ☐	1xSAL 2xCHL
94	Loop 5094	15	12:58	BE	Loop	-	49°34.20	137°47.83	3932		5094-		HM	☐ ☐	1SAL 2CHL
95	Loop	15	13:31	BE	Loop	-	49°33.79	137°39.86	3895		5095-		RL	☐ ☐	Csloop 60d
96	Loop	15	19:29	BE	Loop	-	49°26.78	136°16.99	3777	H.S	5096-		LK	☐ ☐	1SAL 2CHL
97	Surface tow ~ PIT	15	22:04	BE	NET	-	49°24.69	135°43.17	3691		-		MG	☐ ☐	Newton surface tow ~15 min
			22:23	EN			49°23.94	135°42.01		~5m	-		MG	☐ ☐	
98	Loop	15	22:39	BE	Loop	-	49°23.67	135°39.16	3575		5098-		LK	☐ ☐	1SAL 2CHL
99	Surface tow ~ PIT	16	04:59	BE	NET	-	49°16.90	134°15.57	2581		-			☐ ☐	
			05:16	EN			49°16.82	134°14.55		~5m	-			☐ ☐	Newton surface tow ~15 min
100	Loop	16	12:17	BE	Loop		49°04.08	132°40.43	3325		-		RL	☐ ☐	Csloop 60d
101	Loop	16	14:12	BE	Loop		49°06.70	132°14.36	2319		5099-5101		HM	☐ ☐	Loop 5099 5101
102	Loop	16	20:22	BE	Loop	-	49°00.54	130°59.53	2755		5102-		MG	☐ ☐	Loop 5102
103	Loop	17	6:48	BE	Loop		48°49.02	128°39.89	2518		-		RL	☐ ☐	Csloop 60d
104	Loop	17	13:38	BE	Loop		48°40.98	127°01.91	1973		5104-		LK	☐ ☐	Loop 5104
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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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 Version: 6 December 2016

p14.5

1506, 16 JUNE UTZ: Reboot EK60

CALLER (LABELLED) Loop 5099 - SHOULD BE 5101

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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105	P4	17	15:15	BE	ROS	U.S	48° 38.98	126° 40.01	1315		678-696	19	H.M	☐ ☐	
			15:38	BO			48° 38.99	126° 39.98		1323	-			☐ ☐	
			16:19	EN			48° 38.99	126° 40.20			-			☐ ☐	
106	P4	17	16:25	BE	NET	—	48° 38.99	126° 39.98	1308		-			☐ ☐	Bongo 250m
			16:33	BO			48° 38.98	126° 40.01		250	—	—	M.G	☐ ☐	
			16:38	EN			48° 38.98	126° 39.98			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
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