

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2013-18

DATE:

From: Aug 20/2013

To: 5 SEPT. 2013

VESSEL:

J.P. Tully

PROJECT(S):

LINE P

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

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: _____

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 0471

Primary CTD

Make: SBE model: 9+ serial number: 443

Primary temperature serial number: 2023

Primary conductivity serial number: 2280

Secondary temperature serial number: 2668

Secondary conductivity serial number: 2754

Transmissometer: Wetlabs Model: C-Star s/n: 1396DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 3X s/n: 2228 (P) S or NO pump?

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

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

PAR sensor: Biospherical Model: 200 s/n: 4615 Surface PAR? Y/(N)

Other sensors: Altimeter s/n: 1204 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:

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):

NO PROBLEM

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: _____
Sampling interval (seconds): 30
Fluorometer sensor serial number: _____
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:

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Month <u>August</u>				Year <u>2013</u>		Vessel <u>JP TOLLY</u>				Cruise ID <u>2013-18</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
001	S103	21	22:36	BE	ROS	US	48° 35.604	123° 30.042	226		1 - 7	7	MG	☒ ☐	PAR ON
			22:41	BO			48° 35.611	123° 30.016		216	-			☐ ☐	
			22:53	EN			48° 35.62	123° 29.94			-			☐ ☐	
	JF1	22	03:53	BE	LOOP		48° 15.90	123° 30.09	152	6	-			☐ ☐	SAL NOT CHL 2
	JF2	22	05:39	DE	LOOP		48° 17.99	123° 59.96	187	6	-			☐ ☐	SAL NOT CHL 2
	JF3	22	07:42	BE	Loop		48° 26.88	124° 30.06	229		-			☐ ☐	SAL/NOT/CHL 2
	JF4	22	09:43	BE	Loop		48° 32.44	124° 59.97	63		-			☐ ☐	SAL/NOT/CHL 2
002	P1	22	11:55	BE	ROS	U.S.	48° 34.51	125° 29.99	118		8 - 10	3	HM	☒ ☐	
			11:58	BO			48° 34.52	125° 29.99		111	-			☐ ☐	
			12:03	EN			48° 34.54	125° 29.97			-			☐ ☐	
003	P2	22	14:21	BE	ROS	U.S.	48° 35.98	126° 00.03			11 - 24	14	HM	☒ ☐	AMS CAST
			14:24	BO			48° 35.98	126° 00.09			-			☐ ☐	3X GAIN CABLE
			14:36	EN			48° 35.99	126° 00.00			-			☐ ☐	
004	P2	22	14:51	BE	NET		48° 35.98	126° 00.00	117		-		HM	☐ ☐	BONGO
			14:57	BO			48° 35.96	126° 00.01		108	-			☐ ☐	
			14:59	EN			48° 35.96	126° 00.02			-			☐ ☐	
5	P2	22	15:11	BE	ROS	US	48° 35.97	126° 00.05	116		-		MR	☒ ☐	LOG FILE FOR 1 →
			15:14	BO			48° 35.96	126° 00.05		105	25 - 35	11		☐ ☐	
			15:25	EN			48° 35.97	126° 00.04			-			☐ ☐	

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
 =

Bottle Firing Method:

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

Notes:

Time Code:

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MICROPLASTIC

AUG 22

701 0332

48 18.47

123 28.95

VIC → SOOKE

Flow 0.61 L/sec

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0342

48 17.20

123 28.43

THREE CASTS FLOROMETER CABLE GAIR @ 10 x 0.15 CHANGED TO 3 x 0.5 AFTER CAST 5 (P2)

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Month <u>AUG</u>				Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-18</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
006	P3	22	17:10	BE	ROS	U.S.	48° 37.48	126° 19.98	816		36-37	2	H.M.	☒	
			17:24	BO			48° 37.47	126° 20.02		814	-			☐	
			17:42	EN			48° 37.98	126° 20.00			-			☐	
007	P4	22	21:19	BE	ROS	U.S.	48° 39.0	126° 39.98	1320		-			☐	
			21:21	BO			48° 38.99	126° 39.98		300	50-66	17	HG	☒	DM5
			21:46	EN			48° 38.99	126° 39.99			-			☐	CATCH BOTTLE 17 - FINGER and CAROSEL JAMMER
008	P4	22	22:01	BE	TMR	U.N.	48° 39.000	126° 39.980	1321		-			☐	
			22:39	BO			48° 39.027	126° 39.994		1020	38-44	12	NS	☐	
			23:02	EN			48° 38.993	126° 40.000			-			☐	
009	P4	22	23:44	BE	ROS	U.S.	48° 39.007	126° 39.97	1319		79-97	19	MG	☒	DEEP CAST PAR OFF
		23	00:04	BO			48° 39.007	126° 39.97		1318	-			☐	FILE NAME
			00:41	EN			48° 39.01	126° 39.98			-			☐	CALLED 0008!
010	P4	23	02:27	BE	TMR	U.N.	48° 38.99	126° 39.99	1320		67-78	12	NS	☐	
			03:02	BO			48° 39.04	126° 40.01			-			☐	
			03:42	EN			48° 38.98	126° 40.02		1200	-			☐	
011	P4	23	04:25	BE	NET		48° 38.9904	126° 40.0143	1322		-		MG	☐	
			04:34	BO			48° 38.9921	126° 40.0268		250	-			☐	
			04:38	EN			48° 39.0150	126° 40.0159			-			☐	
			:				.	.			-			☐	

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Notes:

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Month <u>AUG</u>				Year <u>2013</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2013-48</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
12	P4	23	4:52	BO	NET		48°39.0676	126°40.0203			-		MG	☐	
			5:33	BO			48°39.0969	126°40.1769	1314.27	1200	-			☐	
			05:53	EN			48°39.1172	126°40.1671			-			☐	
13	P4	23	06:44	BE	ROS	US	48°39.028	126°40.06	1324		98 - 115	18	MG	☒	UBC + ONAR
			07:08	BO			48°39.01	126°40.01		1312	-		H.M.	☐	
			07:40	EN			48°38.95	126°40.00			-			☐	
			:				.	.			-			☐	
14	P4	23	11:10	BE	FUMP		48°38.96	126°39.88	1319		-		H.M.	☐	PARCING & FOLIN
			13:15	CH	.		48°38.59	126°39.56		5	-			☐	PURIFYING ON CTD'S
			:				.	.			-			☐	
15	P4	23	15:29	BE	1.5	2.5	48°38.95	126°40.04	1321		117 - 125	9	H.M.	☐	LIGHT CUST. ON H.M.A
			15:33	BO			48°38.97	126°40.01			-			☐	PUR. ON
			15:41	EN			48°39.00	126°39.96			-			☐	
16	P4	23	16:01	BE	TMR	UN	48°39.00	126°39.95	1320		126 - 137	12	NS	☐	TMR CAST
			16:27	BO			48°39.00	126°39.94		1100	-			☐	
			16:42	EN			48°38.90	126°40.03			-			☐	
17	PL02	23	18:19	BE	LOOP		48°41.63	127°03.20	1930	4-6	-			☐	250 125 023 SIEVE
			18:29	BO			48°41.18	127°05.25			-			☐	10 MIN PLASTICS
			:				.	.			-			☐	

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Time Code:

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Notes:

This page is for any notes or observations

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9.5 9.8 9.8 10.2 FLOW SEC/L

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Month <u>Aug 2013</u>				Year <u>2013</u>		Vessel <u>JP Tully</u>		Cruise ID <u>2015-18</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
18	P5	23	19:04	PE	ROS	US	48° 41.51	127° 10.03	2054		138 - 139	2	MG	☒ ☐	PAR ON OOPS
			19:31	BO			48° 41.52	127° 9.95		2102	-			☐ ☐	
			19:54	EN			48° 41.54	127° 9.99			-			☐ ☐	
19	P6	23	22:16	BE	ROS	US	48° 44.63	127° 34.95	2547		140 - 141	2	MG	☒ ☐	PAR OFF TUNA
			22:52	BO			48° 44.64	127° 39.90		2005	-			☐ ☐	
			23:29	EN			48° 44.66	127° 39.88			-			☐ ☐	
20	P7	24	02:24	BE	ROS	US	48° 46.59	128° 9.99	2506		142 - 143	2	MG	☒ ☐	
			03:00	BO			48° 46.61	128° 10.05		2005	-			☐ ☐	
			03:30	EN			48° 46.55	128° 9.98			-			☐ ☐	
21	P8	24	06:17	BE	NET		48° 48.88	128° 40.16	2520		-		MG	☐ ☐	Redeploy
			06:26	BO			48° 48.83	128° 40.23		250	-			☐ ☐	
			06:31	EN			48° 48.86	128° 40.28			-			☐ ☐	
22	P8	24	06:46	BE	NET		48° 48.02	128° 39.89	2521		-		MG	☐ ☐	
			07:20	BO			48° 49.04	128° 40.22		1200	-			☐ ☐	
			07:50	EN			48° 48.73	128° 40.46			-			☐ ☐	
23	P8	24	08:16	BE	ROS	U.S.	48° 49.076	128° 39.998	2531		144 - 167	24	MG	☒ ☐	+ ONAR
			08:47	BO			48° 48.12	128° 43.14		2005	-			☐ ☐	
			09:42	EN			48° 48.94	128° 40.13			-			☐ ☐	
			:				.	.			-			☐ ☐	

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Bottle Firing Method:

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Month <u>AUGUST</u>				Year <u>2013</u>		Vessel <u>TULLY</u>				Cruise ID <u>2013-18</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
24	P9	24	12:11	BE	ROS	U.S	48° 51.39	129° 09.97	2347		168 - 169	2	H.M.	☒	
			12:45	BO			48° 51.41	129° 09.98		2005	-			☐	
			13:23	EN			48° 51.41	129° 09.99			-			☐	
25	P10	24	15:55	BE	ROS	US	48° 53.54	129° 39.93			170 - 171	2	H.M.	☒	
			16:29	BO			48° 53.59	129° 39.98			-			☐	
			17:03	EN			48° 53.60	129° 40.01			-			☐	
26	P11	24	19:30	BE	ROS	US	48° 55.97	130° 10.01	2755		172 - 173	2	MG	☒	NEGATIVE SPIKE IN SALINITY AT 283 N.O.B PSU
			20:08	BO			48° 56.15	130° 10.26		2005	-			☐	
27	P11	24	20:53	BE	ROS		48° 55.96	130° 10.32		4001	-			☐	LARGE SPIKES IN FLUOR BELOW 1600
			21:03	EN			48° 55.96	130° 10.33			-			☐	
28	PLO3	24	22:22	BE	LOOP		48° 57.45	130° 27.41	2247	5	-		MG	☐	COMPUTER CRASH
			22:32	EN			48° 57.58	130° 29.06			-			☐	10 MIN PLASTICS
29	P12	24	23:28	BE	ROS		48° 58.20	130° 39.98	3231		-			☐	
			23:33	BO			48° 58.20	130° 39.97		300	-			☒	THIS PAR ON
			23:54	EN			48° 58.17	130° 39.98			-			☐	POSITIVE N.O.B. PSU SPOOKS IN SILENCE @ 34
30	P12	25	00:00	BE	THR	UN	48° 58.20	130° 39.95	3231		191 - 202	12	NS	☐	DEEP THR
			00:35	BO			48° 58.20	130° 40.06		2020	-			☐	
			01:53	EN			48° 58.11	130° 40.13			-			☐	
			:				.	.			-			☐	

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Flow
10.4 10.5 10.9 10.2 10.1 SECS /

DAILY SCIENCE LOG

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Month <u>AUGUST</u>			Year <u>2013</u>		Vessel <u>JP TOW</u>		Cruise ID <u>2013-18</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
31	P12	25	02:29	BE	ROS	US	48°58.24	130°39.92	3231		203-225	23	MG	☒ ☐	PAR OFF
			03:28	BO			48°58.20	130°40.04		3276	-			☐ ☐	
			04:37	EN			48°58.20	130°40.01			-			☐ ☐	
32	P12	25	06:04	BE	ROS	US	48°58.20	130°39.95	3228		226-228	3	MG	☒ ☐	DEEP ONAR
			06:47	BO			48°58.21	130°39.97		3275	-			☐ ☐	
			07:48	EN			48°58.22	130°39.96			-			☐ ☐	
33	P12	25	08:10	BE	NET		48°58.20	130°40.00	3229		-		H.M.	☐ ☐	250m BONGO
			08:18	BO			48°58.14	130°39.92		250	-			☐ ☐	
			08:29	EN			48°58.15	130°39.89			-			☐ ☐	
34	P12	25	09:35	BE	NET		48°58.17	130°39.94	3229		-		H.M.	☐ ☐	200m BONGO
			09:05	BO			48°58.05	130°40.03		200	-			☐ ☐	
			09:31	EN			48°58.011	130°40.1786			-			☐ ☐	
35	P12	25	09:59	BE	ROS		48°58.20	130°39.99	3231		229-244	16	H.M.	☒ ☐	UBC-ONAR
			10:29	BO			48°58.18	130°39.95			-			☐ ☐	*
			11:12	EN			48°58.14	130°40.02			-			☐ ☐	
36	P12	25	:				48°58.20	130°40.02	3231		245-256	12	HS	☐ ☐	* OVER (CHANGE)
36	P12	25	15:24	BE	ROS	U.S.	48°58.22	130°39.99	3231		-			☒ ☐	LIGHT CAST
			15:28	BO			48°58.19	130°39.97		150	-		H.M.	☐ ☐	PAR ON
			15:34	EN			48°58.16	130°39.96			-			☐ ☐	PAR OFF

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* MISSED A BOTTLE TRIP - UP FROM 500 → 450 BACK DOWN TO 500 - TRIPPED MISSING NISHIM - CONTINUED ON

* CHANGED FLUROMETER CABLE FROM 3X 0.50 $\mu\text{g/L}$ TO 10X 0.15 $\mu\text{g/L}$ * TMR CANCELLED DUE TO WEATHER

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>AUGUST</u>				Year <u>2013</u>		Vessel <u>JPTULY</u>		Cruise ID <u>2013-18</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
37	P13	25	21:04	BE	ROS	US	49°02.58	131°39.95	2903		266-267	2	MG	☒	30-40K
			21:45	BO			49°02.53	131°40.08		2005	-			☐	
			22:26	EN			49°02.58	131°39.84			-			☐	
38	P14	26	03:17	BE	ROS	US	49°07.42	132°39.98	3309		268-269		MG	☒	
			03:41	BO			49°07.43	132°40.03		2005	-			☐	
			04:10	EN			49°07.42	132°39.92			-			☐	
39	P15	26	08:46	BE	ROS	U.S.	49°12.00	133°39.99	3401		270-271	2	H.M.	☒	
			09:18	BO			49°11.99	133°40.01		2005	-			☐	
			09:56	EN			49°12.00	133°40.01			-			☐	
40	P16	26	14:29	BG	TMR	U.N	49°17.00	134°39.90	3623		272-283	12	NS	☐	P16 - TMR-1
			14:48	BO			49°17.00	134°39.95		1050	-			☐	TMR to 50m
			15:12	EN			49°17.00	134°39.95			-			☐	to surface to blm
41	P16	26	16:11	BE	ROS	U.S.	49°16.99	134°39.95	3622		284-292	9	H.M.	☒	LIGHT CAST
			16:15	BO			49°16.98	134°39.96			-			☐	PAR ON - 340-50m
			16:22	EN			49°16.99	134°39.99			-			☐	
42	P16	26	17:26	BE	ROS	U.S.	49°17.01	134°40.00	3622		293-316	24		☒	PAR OFF
			18:30	BO			49°17.00	134°40.00		3681	-			☐	DEEP CAST
			20:03	EN			49°17.00	134°39.96			-			☐	
			:				.	.			-			☐	

Event Type:

BOT = Bottle cast (no CTD)
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SET = Fish Set

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NET = Plankton Net Haul
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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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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

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Month <u>Aug</u>			Year <u>2013</u>			Vessel <u>JP Tully</u>			Cruise ID <u>2013-18</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
43	P16	26	20:15	BE	TMR-2	UN	49° 17.00	134° 39.94	3623		317 - 328	12	NS	☐ ☐	March's rest
			20:42	BO			49° 17.02	134° 39.96	"		-			☐ ☐	
			20:38	EN			49° 17.03	134° 39.99	"		-			☐ ☐	
44	P16	26	21:34	BE	ROS	US	49° 17.00	134° 40.00	3622		-			☐ ☐	
			21:40	BO			49° 17.01	134° 40.04	"	300	329 - 345	17	MG	☒ ☐	PAGE ON
			22:00	EN			49° 17.00	134° 39.99	"		-			☐ ☐	
45	P16	26	22:17	BE	NET		49° 17.0279	134° 40.0453	3622		-			☐ ☐	
			22:24	BO			49° 17.0449	134° 40.0886	"	250	-			☐ ☐	
			22:30	EN			49° 17.0499	134° 40.1302	3623		-			☐ ☐	
46	P16	26	22:41	BE	NET		49° 17.0186	134° 40.1130	3623		-			☐ ☐	
			23:04	BO			49° 17.0042	134° 40.2231	3622	1200	-			☐ ☐	
			23:25	EN			49° 17.0642	134° 40.3111	3622		-			☐ ☐	
47	P16	26	23:46	BE	ROS		49° 17.09	134° 40.00	3622		346 - 349	4	MR	☒ ☐	ONLINE PAGE OFF
			00:22	BO			49° 17.10	134° 40.16		2005	-			☐ ☐	
			00:58	EN			49° 17.02	134° 40.11			-			☐ ☐	
48	P16	27	01:38	BE	TMR-3	UN	49° 17.09	134° 40.11	3623		350 - 361	12	NS	☐ ☐	CS TMR
			01:58	BO			49° 17.09	134° 40.12		1015	-			☐ ☐	
			02:25	EN			49° 17.01	134° 39.98			-			☐ ☐	
49	P16	27	02:30	BE	LOOP		49° 17.02	134° 40.00	3622	5	-			☐ ☐	10 Min Plastics

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	Seconds					
FLOW RATE	11.4	11.4	11.6	11.5	11.4	To Fill 1 L

DAILY SCIENCE LOG

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Month <u>Aug</u>				Year <u>2013</u>		Vessel <u>TULLY</u>				Cruise ID <u>2013-18</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
50	P16	27	03:01	BE	ROS	US	49° 16.99	134° 40.00	3623		-		Mg	☒	DEEP ONAR
			04:09	BO			49° 16.99	134° 39.98		3685	-			☐	
			05:19	EN			49° 17.03	134° 39.98			-			☐	
51	P16	27	12:30	BE	Pump		49° 16.80	134° 40.00	3622	10	-		HM	☐	Pumping 120 L/min
			:				.	.			-			☐	
			14:02	EN			49° 16.12	134° 39.97			-			☐	
52	P16	27	14:17	BGr	THP-4	UN	49° 17.08	134° 40.05	3622		366-377	12	NS	☐	THP #4 for 15+ CS
			14:50	BO			49° 17.03	134° 40.01		2015	-			☐	
			15:28	EN			49° 17.04	134° 39.99			-			☐	
53	P17	27	19:44	BE	ROS	US	49° 20.97	135° 39.99	3705		378-379	2	Mg	☒	
			20:19	BO	.		49° 21.01	135° 40.00		2005	-			☐	
			21:00	EN			49° 21.03	135° 40.02			-			☐	
54	P18	28	01:19	BE	ROS	US	49° 26.02	137° 39.99	3819		380-381	2	Mg	☒	
			01:57	BO			49° 26.06	137° 39.96		2005	-			☐	
			02:35	EN			49° 25.97	137° 40.04			-			☐	
55	P19	28	06:51	BE			49° 30.01	137° 39.99	3902		382-383	2	HM	☒	CONFIG CHANGED TO
			07:26	BO			49° 30.01	137° 40.00		2005	-			☐	3710.50
			08:03	EN			49° 29.99	137° 40.00			-			☐	
			:				.	.			-			☐	

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Notes:

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COM FILE CHANGED TO 30 x 0-5 — OOPS (SHOULD BE 3 x 0-50)
~~3 x 10-50 m/c — SHOULD HAVE BEEN CHANGED ON CAST 041~~

DAILY SCIENCE LOG

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Month <u>AUGUST</u>				Year <u>2013</u>		Vessel <u>TULLY</u>				Cruise ID <u>2013-18</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
56	P20	26	12:12	BE	ROS	U.S.	49° 34.07	138° 40.05	3946		384 - 387	4	H.M.	☒ ☐	ONAR CAST
			12:48	BO			49° 34.21	138° 39.96		2005	-			☐ ☐	
			13:27	EN			49° 34.31	138° 40.09			-			☐ ☐	
57	P20	28	14:21	BE	THRI	UN	49° 33.95	138° 39.92	3949		388 - 399	12	NS	☐ ☐	
			14:39	BO			49° 34.01	138° 39.91		1015	-			☐ ☐	
			14:55	EN			49° 33.99	138° 39.93			-			☐ ☐	
58	P20	28	16:20	BE	ROS	U.S.	49° 33.98	138° 40.02	3948		400 - 408	9	H.M.	☒ ☐	LIGHT CAST. PAR ON
			16:25	BO			49° 33.99	138° 39.99		150	-			☐ ☐	* →
			16:31	EN			49° 33.99	138° 40.02			-			☐ ☐	PAR OFF
59	P20	28	17:21	BE	ROS	U.S.	49° 33.98	138° 40.03	3947		409 - 432	24	H.M.	☒ ☐	DEEP CAST
			18:29	BO			49° 33.98	138° 40.01		4024	-			☐ ☐	Switched ^{O₂} THERMISTOR
			20:02	EN			49° 33.97	138° 40.05			-		MG	☐ ☐	
60	P20	28	21:19	BE	ROS	U.S.	49° 33.98	138° 40.03	3947		433 - 449	17	MG	☒ ☐	DMS PAR ON
			21:24	BO			49° 33.99	138° 40.03		300	-			☐ ☐	
			21:46	EN			49° 33.98	138° 40.04			-			☐ ☐	
61	P20	28	22:01	BE	NET		49° 33.99	138° 39.97	3947		-			☐ ☐	
			22:22	BO			49° 34.06	138° 40.03		250	-			☐ ☐	
			22:29	EN			49° 34.12	138° 40.02			-			☐ ☐	
			:				°	°			-			☐ ☐	

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* CON FILE @ 3x 0-50 ps/1 FINALLY

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Month <u>A00T</u>				Year <u>2013</u>		Vessel <u>TULLY</u>		Cruise ID <u>2013-18</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
62	P20	28	22:37	BE	NET		49° 34.08	138° 39.98	3947		-			☐	
			23:26	BO			49° 34.17	138° 39.99		1200	-			☐	
			23:47	EN			49° 34.20	138° 40.14			-			☐	
63	P20	29	00:58	BE	THRZ	UN	49° 33.98	138° 40.13	3947		450-461	12	NS	☐	
			01:32	BO			49° 33.99	138° 40.05		2015	-			☐	
			02:29	EN			49° 33.98	138° 39.85			-			☐	
64	P20	29	03:08	BE	ROS	UN	49° 34.00	138° 40.11	3947		462-465	4	MG	☒	DEEP ON AIR
			04:12	BO			49° 34.01	138° 40.02		4000	-			☐	PAR OFF
			05:21	EN			49° 34.01	138° 40.00			-			☐	
65	P20	29	06:00	BE	PUMP		49° 34.07	138° 40.34	3946	21m	466-			☐	
			08:45	EN			49° 34.06	138° 40.31			-			☐	
66	P21	29	13:07	BE	ROS	U.S.	49° 38.02	139° 40.07	3940		467-468	2	MG	☒	+ 2 CHL LOOPS
			13:38	BO			49° 37.99	139° 40.05		2005	-			☐	
			14:16	EN			49° 37.98	139° 40.01			-			☐	
67	P22	29	18:51	BE	ROS	U.S.	49° 42.02	140° 40.07	3870		469-472	4	MG	☒	CHANGED FLUO CABLE
			19:24	BO			49° 42.00	140° 40.06		2005	-			☐	FROM 3/0-50 TO 10/0
			20:01	EN			49° 42.00	140° 40.20			-			☐	+ 2 CHL LOOPS
68		29	20:45	DE	DRF		49° 42.64	140° 48.87	3829	0	-			☐	122-267 2916-A F/C
69	PL05	29	20:47	BE	LOOP		49° 42.68	140° 49.42	3832	5	-			☐	PLASTIC 49 140 10 MIN 42.84 51.45

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LARGE BARREL? BODY? FLOATED BY STARBOARD SIDE AFT. BRIDGE DID NOT FEEL ANY URGE TO INVESTIGATE

SECS
FLOW RATE 11.4 11.1 11.1 11.2 11.0 - FILL 1L

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>AUGUST</u>			Year <u>2013</u>			Vessel <u>LP Tully</u>			Cruise ID <u>2013-18</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
70	P23	30	00:31	BE	ROS	US	49° 46.01	141° 39.98	4031		473 - 496	24	MG	☒ ☐	CRUSSION CAST
			01:02	BO			49° 46.02	141° 39.96		2005	-			☐ ☐	2 x HL LOOPS
			01:37	EN			49° 46.04	141° 39.97			-			☐ ☐	
71	Loop 71	30	02:32	BE	LOOP		49° 46.68	141° 49.83	4023	5	-			☐ ☐	2 CHL 1 SAL 1 NIT
72	P24	30	06:40	BE	ROS	US	49° 50.19	142° 39.99	3967		497 - 498	2	MG	☒ ☐	
			07:16	BO			49° 50.19	142° 40.03		2005	-		H.M.	☐ ☐	
			07:52	EN			49° 50.18	142° 39.98			-			☐ ☐	
73	P25	30	12:04	BE	ROS	U.S.	50° 00.01	143° 36.29	4124		-			☐ ☐	
			12:37	BO			50° 00.02	143° 36.26		2005	499 - 500	2	H.M.	☒ ☐	
			13:13	EN			50° 00.01	143° 36.26			-			☐ ☐	
74	Loop 74	30	14:36	BE	LOOP		50° 00.03	143° 52.87		2114	-			☐ ☐	2 x CHL / SAL
75	P35	30	16:46	BE	ROS	U.S.	49° 59.97	144° 18.20	4128		501 - 502	2	H.M.	☒ ☐	
			17:23	BO			49° 59.99	144° 18.21		2005	-			☐ ☐	
			17:59	EN			49° 59.99	144° 18.24			-			☐ ☐	
76	P26	30	21:15	BE	THR 1	U.N	50° 00.01	145° 00.15	4226		503 - 514	12	NS	☐ ☐	
			22:04	BO			50° 00.01	145° 00.14		1215	-			☐ ☐	
			22:54	EN			50° 00.06	145° 00.29			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month			Year			Vessel			Cruise ID						
August			2013			JP-6664			2013-12						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
77	P26	30	23:14	BE	ROS	US	50°00.06	144°59.88	4226		-		MG	☒ ☐	DRS + '0
			23:22	BO			50°00.07	144°59.82		300	-			☐ ☐	PAR ON
			23:48	EN			50°00.08	144°59.80			-			☐ ☐	LOTS OF ROLLING
78	P26	31	01:19	BE	ROS	US	50°00.09	144°59.89	4226		535-538	4	MG	☒ ☐	SHALLOW '0
			01:22	BO			50°00.12	144°59.84		150	-			☐ ☐	SHIP ROLLING
			01:31	EN			50°00.15	144°59.69			-			☐ ☐	PAR OFF
79	P26	31	03:12	BE	ROS	US	49°59.91	144°59.95	4226		539-560	22	MG	☒ ☐	UBC + ONAR
			04:02	BO			49°59.90	144°59.97		2500	-			☐ ☐	
			04:57	EN			49°59.81	145°00.09			-			☐ ☐	RAINBOW SAND
80	P26	31	05:20	BE	NET		49°59.95	144°59.95	4226		-			☐ ☐	SAVARY
			05:30	BO			49°59.94	145°00.01		250	-			☐ ☐	SOCALITE
			05:34	EN			49°59.94	145°00.05			-			☐ ☐	RAINBOW SAND
81	P26	31	05:43	BE	NET		49°59.93	145°00.01	4226		-			☐ ☐	
			06:25	BO			49°59.91	145°00.046		1200	-			☐ ☐	
			06:46	EN			49°59.86	145°00.66			-			☐ ☐	
82	P26	31	6:57	BE	NET		49°59.96	145°00.00		2000	-			☐ ☐	
			07:37	BO			49°59.99	145°00.08			-			☐ ☐	
			08:15	EN			50°00.03	145°00.10			-			☐ ☐	
			:				.	.			-			☐ ☐	

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LOTS OF BORISCES GOING THROUGH TSG FLOWMETER READINGS NOT RIGHT.

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Month AUGUST			Year 2013			Vessel TULLY			Cruise ID 2013-18						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
83	P 26	31	11:35	BE	ROS	U.S.	50° 00.02	145° 00.08	4225		561 - 565	5	H.M.	☒ ☐	DEEP ONAR
			12:50	BO			50° 00.04	145° 00.06		4317	-			☐ ☐	* →
			14:04	EN			50° 00.00	144° 59.98			-			☐ ☐	
84	P26	31	14:46	BE	TMP 2	U.N.	49° 59.97	144° 59.92	4225		566 - 577	12	NS	☐ ☐	
			15:08	BO			49° 59.95	144° 59.94		2015	-			☐ ☐	
			15:55	EN			49° 59.99	144° 59.96			-			☐ ☐	
85	P 26	31	17:04	BE	ROS	U.S.	49° 59.94	144° 59.99	4226		578 - 586	9	H.M.	☒ ☐	LIGHT CASE
			17:09	BO			49° 59.96	144° 59.97		150	-			☐ ☐	PAR ON
			17:15	EN			49° 59.96	144° 59.97			-			☐ ☐	
86	PA-007	31	18:24	BE	ROS	U.S.	50° 06.86	144° 49.85	4196		587 - 589	3	H.M.	☒ ☐	ONAR @ MOORING SITE
			18:33	BO			50° 06.88	144° 49.85		500	-			☐ ☐	
			18:45	EN			50° 06.86	144° 49.84			-			☐ ☐	
87	P26	31	19:35	DE	BOAT		50° 01.38	144° 57.59	4219		-			☐ ☐	2.5 miles from P26
			20:04	RE			49° 59.96	144° 59.97			-			☐ ☐	
88	P206	31	19:39	BE	LOOP		50° 01.19	144° 57.8	4220	5	-			☐ ☐	PLASTICS 10 MIN ON SW
89	P26	31	20:07	BE	ROS		49° 59.96	145° 00.00	4226		590 - 613	24	MG	☒ ☐	
			21:25	RE			49° 59.96	145° 00.04		4318	-			☐ ☐	
			23:08	EN			49° 59.99	145° 00.12			-			☐ ☐	
			:				°	°			-			☐ ☐	

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

Notes:

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

Produced by the Water Properties Group, IOS

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Version: 14 February 2013

* - SOMETHING WRONG WITH FLUORESCENCE CHANNEL - SPIKING BADLY - I SUDDENLY SUSPECT THAT THE FLUO. AND JIM BISHOP'S SENSOR ARE ON THE WRONG CHANNELS - THE BAGS HOLDING STYRO CUPS ARE BLOCKING THE PATH OF J.B.'S SENSOR HENCE THE SPIKING ON THE FLUO. CHANNEL. THIS ALSO EXPLAINS WHY CHANGING THE FLUO. CABLE SHOWED NO CHANGE IN VALUES. JUST A GUESS

P145/17

* FLOWMETER TSB STOPPED WORKING SOME TIME AFTER 1900
LOTS OF BUBBLES

SPIKE IN FLUOR AT 244.25 THE DECLINE TO 244.4 TO 36 244.56 UNDER 2.4 244.74 UNDER 1.2
OVER 6

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year		Vessel			Cruise ID							
August / Sept			2013		R/P TULLY			2013-18							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
90	P26	31	23:20	BE	BOT	S	49° 59. 96	145 ° 00 . 15	4226		614-620	4	NS	☐ ☐	5-3- in chains
		01	01:10	MR			° .	° .		4000	-			☐ ☐	45 min. Wait
			03:35	EN			50 ° 00. 32	145 ° 00 . 77			-			☐ ☐	
91		01	03:45	DE	DRE		50 ° 00 . 21	144 ° 59 . 59	4204		-			☐ ☐	122257 2916 A EIC
92	Loop 92	01	16 :19	BE	Loop		49 ° 46 . 47	141 ° 47 . 52	4221	SINK	-		U.M	☐ ☐	Loop 92 CHL SAL
93	PL07	01	19:57	BE	Loop		49 ° 42 . 54	140 ° 50 . 79	3862	5	-			☐ ☐	10 MIN PLASTICS
			20:07	EN			49 ° 42 . 2	140 ° 47 . 54			-			☐ ☐	
94	Loop 94	01	22:09	BE	Loop		49 ° 40 . 29	140 ° 15 . 85	3860	5	-			☐ ☐	2 CHL / SAL
95	Loop 95	02	07:07	BE	Loop		49° 32.75	138° 23.36	3964	5	-			☐ ☐	" "
96	Loop 96	02	17:49	BE	Loop		49 ° 20 . 71	135 ° 44 . 74	3068		-		U.M	☐ ☐	Loop 2 CHL / SAL
97	Loop 97	03	02:05	BE	Loop		49 ° 11 . 96	133 ° 42 . 54	3437	5	-			☐ ☐	" " "
98	PL08	03	02:09	BE	Loop		49 ° 11 . 91	133 ° 41 . 48	3410	5	-			☐ ☐	10 MIN
			02:19	BO			49 ° .	133 ° .			-			☐ ☐	
99	P12	03	14:24	BE	TMR1	U.N	48 ° 58 . 21	130 ° 40 . 09	3229		621-632	12	NS	☐ ☐	
			14:53	BO			48 ° 58 . 13	130 ° 39 . 88		2015	-			☐ ☐	
			15:28	EN			48 ° 58 . 23	130 ° 39 . 97			-			☐ ☐	
100	P12	03	15:39	BE	ROS	US	48 ° 58 . 15	130 ° 40 . 09	3229		633-634	2	U.M	☐ ☒	DEPLOYER REPEAT
			16:40	BO			48 ° 58 . 19	130 ° 40 . 03		3274	-			☐ ☐	
			17:4	EN			48 ° 58 . 19	130 ° 40 . 07			-			☐ ☐	

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_____ = _____

Bottle Firing Method:

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

Notes: _____

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

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TSG Luis not logging.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>SEPTEMBER</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-18</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
101	P12	03	18:08	BE	TMR	UN	48° 58.18	130° 39.97	3231		635-646	12	NS	☐ ☐	
			18:44	BO			48° 58.20	130° 40.02		2055	-			☐ ☐	
			20:17	EN			48° 58.22	130° 40.09			-			☐ ☐	
102	P12	03	20:26	BE	CTD	-	48° 58.21	130° 40.06	3231		-			☐ ☐	10x 0-15 CABLE OFF
			20:30	BO			48° 58.22	130° 40.04		200	-	-	H.M.	☐ ☒	FLUO - TEST CAST
			20:34	EN			48° 58.20	130° 40.04			-			☐ ☐	3x 0-50 CABLE ON
103	LOOP 103	03	22:31	BE	LOOP		48° 56.23	130° 13.05	2745	5	-		2 CHL 1 SAL	☐ ☐	* →
104	P12	03	22:55	BE	LOOP		48° 55.88	130° 08.82	2757	5	-			☐ ☐	10 MIN
			23:03	BO			48° 55.64	130° 06.53			-			☐ ☐	
105	P4	04	13:52	BE	ROS	U.S.	48° 39.98	126° 39.88	1318		647-662	16	H.M.	☐ ☒	P4 REPEAT
			14:16	BO			48° 39.03	126° 39.99		1318	-			☐ ☐	
			14:52	EN			48° 39.04	126° 39.90			-			☐ ☐	
106	P4	04	15:05	BE	BOT	S	48° 39.00	126° 39.98	1318		663-	1	NS	☐ ☐	
			15:24	MR			48° 38.97	126° 40.06		1000	-			☐ ☐	15 MIN WORK
			15:57	EN			48° 38.99	126° 40.01			-			☐ ☐	
107	P4	04	16:06		CTD		48° 39.03	126° 40.01	1320		-	-	H.M.	☐ ☐	FLUROMETER CABLE
			16:10				48° 39.01	126° 40.01		200	-			☐ ☐	TEST
			16:14				48° 39.01	126° 40.00			-			☐ ☐	
108	-	04	:				°	°			-			☐ ☐	→

Event Type:

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Notes:

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* SWITCHED JB AND FLUROMETER CABLES SO FLUO CABLE IS ON CHANNEL 0 AND JB IS ON CHANNEL 1 (I THINK SWITCHED AT 'Y' CABLE)

N 0200 UTC?

TSG DOWN AT 247.0416 SOMETHING WRONG WITH SEAWATER SYSTEM ENGINEERS ON IT

108 was a file for Jim Bishop, with all his instruments blacked out.

DAILY SCIENCE LOG

Month Aug				Year 2013		Vessel JP TULOH				Cruise ID 2013-18					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
109	PL 10	4	19:52	BE	LOOP		48 ° 32.71	125 ° 45.67	86.5	5	-			☐ ☐	
			20:03	EO			48 ° 32.41	125 ° 42.48			-			☐ ☐	
110	LOOP 110	4	20:38	BE	LOOP		48 ° 31.78	125 ° 35.66	82	5	-			☐ ☐	NEW PUMI
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
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