

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2015-12

DATE:

From: 21 July 2015

To:

4 Aug 2015

VESSEL:

W.E. Richer

PROJECT(S):

La Pérouse Acoustic Trawl Survey.

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

WaterProperties.ca

Captain: Bryan Pennell First Officer: Chris
Second Officer: Bennett Third Officer: _____
Fishing Master: Les Hann / Jim Brown Chief Engineer: John

Mission Participants / Agencies:

DFO

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

1st Leg Scientific Personnel: Chief Scientist: JENNIFER BOLOT

Name	Watch	Cabin	Name	Watch	Cabin
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LINNEA FLOSTRAND _____

VANESSA HODES

Matt Thompson

STÉPHANE GAUTHIER

[illegible]

2nd Leg Scientific Personnel: Chief Scientist: JENNIFER ROY

Name	Watch	Cabin	Name	Watch	Cabin
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LINNEA FLOSTRAND

STÉPHANE GAUTHIER

MARY THIESS _____

STEVE ROMAINE

CAITLIN FIRENKEZ

**** 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: WP10

Data acquisition program: Seasave v.7.21d

CTD deck unit make: SBE model: 11plus serial number: 0424

Primary CTD

Make: SBE model: 9 serial number: 0550

Primary temperature serial number: 2374

Primary conductivity serial number: 2128

Secondary temperature serial number: 2710

Secondary conductivity serial number: 3184

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 3x, 0-50µg/l s/n: 3641 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 1176 P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: pH s/n: 0851 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?

** Only one bottle was used for water samples, bottle mounted 4m above CTD*

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: _____
Manufacturer: _____
Volume of bottles (litres): _____

Winches:

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

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

Salinometer:

Make: _____ Model: _____ Serial Number: _____

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

Oxygen Kit(s):

Make: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____

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

Thermosalinograph System (SBE21):

Program: _____ Version: _____

Sampling interval (seconds): _____

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:

Scientific Equipment Used During Cruise

This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for SBE 9/16/19/25.

Other CTD units:

RBR Serial Number: _____ Sensors: _____

Others: _____

Plankton Nets:

Bongo #1 Frame Size: 58 cm Mesh: 253 μ m Flowmeter: yes
Bongo #2 Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____
_____ Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____
_____ Frame Size: _____ cm Mesh: _____ μ m Flowmeter: _____

Multinet ☐ BIONESS ☐ Neuston ☐ Others: _____

Event 31 had a RBR mounted on flowmeter side - but it was not logging; All Bongo events following Event 31 had the RBR + it was logging temp + depth data

Trawl Gear:

Midwater Trawls: SOG ☐ Highseas ☐ Pelagic ☒ Other: _____

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☒ Other: _____

American Shrimp Trawl ☐

Notes: _____

Trawl Doors: USA Jet ☒ Tyburon ☐ _____

Sounders : Wesmar 380 ☒ Others: _____

Acoustics:

Echosounder #1 _____ Frequencies (KHz): 12 ☐ 18 ☒ 38 ☒ 70 ☐ 120 ☒ 200 ☐

Others: _____

Echosounder #2 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes: _____

Other Gear in Operation:

1. _____
2. _____
3. _____
4. _____
5. _____

for this log BONGIO NET

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Vessel			Cruise ID			Page			of		
JULY			2015			RICKER			2015-12								
Event Number	Station Name	UTC Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments		
1		22	04:10	BE	CTD	N/A	49° 12' .140	123° 57' .620	40	30	N/A	8	JB	☐	CTD 1 at anchor		
			04:10	BO	↓	↓	49° 12' .142	123° 57' .626	↓		-			☐			
			04:11	EN	↓	↓	49° 12' .142	123° 57' .626	↓		-			☐			
2	E1	22	21:30	BE	CTD	N/A	48° 31' .790	125° 5' .143	121		-	0	UM	☐	CTD 2		
			21:31	BO	↓	N/A	48° 31' .801	125° 5' .159	↓	120	-	0		☐			
			21:34	EN	↓	N/A	48° 31' .812	125° 5' .168	↓		-			☐			
3	E1	22	21:44	BE	BONGIO	N/A	48° .	125° .	126	115	-	1 jar	VHUF JB	☐	BONGIO 1		
			21:48	BO	↓	↓	48° 31' .911	125° 5' .512			-	1 bag		☐			
			21:50	EN	↓	↓	48° 31' .936	125° 5' .557	128		-			☐			
4	LB09	23	00:35	BE	CTD	MSG	48° 22' .075	125° 34' .540	153	140	-	5 LILs		☐	CTD 3		
			00:42	BO	↓	MSG	48° 22' .147	125° 34' .517	152		-			☐			
			00:50	EN	↓	MSG	48° 22' .199	125° 34' .451	153		-			☐			
5	LB09	23	:	BE	BONGIO		48° .	125° .	145	140	-	1 jar	VHUF JB	☐	BONGIO 2		
			:	BO	↓		48° 22' .336	125° 34' .551	145		-	1 bag		☐			
			:	BN	↓		48° 22' .364	125° 34' .562	144		-			☐			
6	LB17	23	2:59	BE	CTD		48° 12' .900	125° 51' .672	494	485	-			☐	CTD 4		
			3:10	BO	↓		48° 12' .846	125° 51' .686			-			☐			
			3:20	BN	↓		48° 12' .810	125° 51' .708			-			☐			
			:				° .	° .			-			☐			

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:

Produced by the Water Properties Group, IOS

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Month			JULY		Year		2015		Vessel		KICKER		Cruise ID		2015-12	
Event Number	Station Name	WATC Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth (M)	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
7	LB12	22	20:28	BE	BONGO	N/A	48° . .	125° . .	515	290	-	1	VHJB	☐	BONGO #3	
			20:38	BO	↓		48° 12.809	125° 51.731			-			☐		
			20:43	BN	↓		48° 12.821	125° 51.770			-			☐		
8	LB12	23	20:59	BE	BONGO		48° . .	125° . .			-	1 jar 1 bag		☐		
			21:08	BO	↓		48° 12.616	125° 51.672	515	505	-		VHJB	☐	BONGO #4	
			21:18	BN	↓		48° 12.403	125° 51.455			-			☐		
9		23	13:39	BE	CTD		48° 0.376	125° 25.093	245	235	-	1	JB	☐	CTD 5	
			13:43	BO	↓		48° 0.377	125° 25.111			-			☐	When retrieved they put CTD down deeper instead of shallower	
			13:	BN	↓		48° 0.372	125° 25.117			-			☐		
12	LA04	23	21:12	BE	CTD		48° 20.202	125° 2.337	190	185	-	1	LF's	☐	CTD 6 - no salinity sample.	
			21:19	BO			48° 20.172	125° 2.426			-			☐		
			21:23	BN			48° 20.144	125° 2.515			-			☐		
13	LA04	23	21:26	BE	BONGO		48° 20.147	125° 2.526	190	180	-	1 jar 1 bag	LF-VH	☐	BONGO 5	
			21:31	BO			48° 20.101	125° 2.732			-			☐		
			21:35	BN			48° 20.079	125° 2.774			-			☐		
17		25	02:02	BE	CTD		48° 22.537	125° 52.038	189	180	-	1	LFJB	☐	CTD 7	
			02:08	BO	↓		48° 22.526	125° 52.076			-			☐	Bongo next page	
			02:13	BN	↓		48° 22.51	125° 52.081			-			☐		
			:				° . .	° . .			-			☐		

Event Type:

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Notes:

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EVENT 19 + 20 = midwater trawl
23 + 26

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			JULY		Year		2014		Vessel		RICKER		Cruise ID		2015-12	
Event Number	Station Name	WTC 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	
18		25	02:19	BE	BONGO		48° 22.584	125° 52.120	195	180	-	1 jar	VH LF	☐	Bongo 6 (CTD 7)	
			02:24	BO	↓		48° 22.533	125° 52.143			-	1 bag		☐		
			02:28	BN	↓		48° 22.541	125° 52.167			-			☐		
21		26	00:43	BE	CTD		48° 29.587	126° 7.901	200	190	-		SG+MT	☐	CTD 8	
			00:47	BO	↓		48° 29.515	126° 7.949			-			☐		
			00:51	BN	↓		48° 29.466	126° 7.970			-			☐		
22		26	00:54	BE	BONGO		48° 29.374	126° 8.062	200	190	-	1 jar	VH JB	☐	Bongo 7	
			00:59	BO	↓		48° 29.369	126° 8.071			-	1 bag		☐		
			01:03	EN	↓		48° 29.293	126° 8.186			-			☐		
24	LC02	26	19:50	BE	CTD		48° 48.601	125° 30.780	110	100	-	5	TB	☐	CTD 9	
			19:53	BO	↓		48° 48.544	125° 30.835			-			☐		
			19:57	EN	↓		48° 48.504	125° 30.858			-			☐		
25	LC02	26	20:01	BE	BONGO		48° 48.462	125° 30.909	110	100	-	1 jar	VH LF JB	☐	Bongo 8	
			20:04	BO	↓		48° 48.431	125° 30.975			-	1 bag		☐		
			20:07	EN	↓		48° 48.405	125° 30.013			-			☐		
27	LD02	27	21:26	BE	CTD		48° 58.331	125° 46.895	38	30	-	5	VH	☐	CTD 10	
			21:27	BO	↓		48° 58.376	125° 46.909			-			☐		
			21:31	EN	↓		48° 58.338	125° 46.924			-			☐		
			:	:			°	°			-			☐		

do not use ammonia products

Event Type:
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Notes:

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Fishing Midway - Event 29, 32
Frame

Month			Year		Vessel			Cruise ID							
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/Fl Cleaned	Comments
							Latitude	Longitude							
28	LD02	27	21:36	BE	Bongo		48° 58.340	125° 47.027	37	25	-	2 jars	LF, VH, JS	☐	Bongo 9
			21:37	BO	↓		48° 58.337	125° 47.040			-	1 bag		☐	
			21:38	EN	↓		48° 58.336	125° 47.044			-			☐	
30		29	16:57	BE	CTD		48° 43.560	126° 14.790	178	173	-	1	SN	☒	CTD 11
			17:01	BO	↓		48° 43.533	126° 14.792			-			☐	bottle @ 153m
			17:06	EN			48° 43.516	126° 14.793			-			☐	Salinity Only
31		29	17:29	BE	Bongo		48° 43.529	126° 14.946	178	170	-	1	LF, MT	☐	Bongo 10
			17:33	BO	↓		48° 43.534	126° 14.955			-			☐	T-D RBR mounted
			17:37	EN	↓		48° 43.552	126° 14.981			-			☐	in net mesh on fluorometer - NDT logging
33	LC05	30	01:21	BE	CTD		48° 35.930	125° 47.364	62	58	-		SR	☐	CTD 12
			01:24	BO	↓		48° 35.924	125° 47.391			-			☐	
			01:25	EN			48° 35.910	125° 47.355			-			☐	
34	LC05	30	01:28	BE	Bongo		48° 39.887	125° 47.441	64	55	-	1 jar	MT, JS	☐	Bongo 11
			01:29	BO	↓		48° 39.879	125° 47.465			-	1 bag		☐	T-D RBR - now logging
			01:31	EN			48° 39.863	125° 47.483			-			☐	
35		30	16:01	BE	CTD		48° 35.582	125° 41.766	62	57	-		SN, MT	☐	CTD 13
			16:03	BO	↓		48° 35.586	125° 41.791			-			☐	
			16:06	EN			48° 35.616	125° 41.810			-			☐	
			:				°	°			-			☐	

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Notes:

Bottle Firing Method:

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Fishing Events = 37, 40, 43

DAILY SCIENCE LOG

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Month			Year		Vessel			Cruise ID		2015-12					
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	Trms/Fl Cleaned	Comments
							Latitude	Longitude							
36		30	16:09	BE	Bongo		48° 35.681	125° 41.805	60	50	-	1 jar	MT LF	☐	Bongo 12
			16:11	BO	↓		48° 35.687	125° 41.806			-	1 bag		☐	with RBR on
			16:12	EN			48° 35.717	125° 41.826			-			☐	fluorometer side
			:				° .	° .			-			☐	
38		30	19:39	BE	CTD		48° 44.186	125° 15.475	56	52	-		8N	☐	CTD 14
			19:42	BO			48° 44.225	125° 15.502			-			☐	
			19:43	EN			48° 44.236	125° 15.506			-			☐	
			:				° .	° .			-			☐	
39		30	19:47	BE	Bongo NET		48° 44.274	125° 15.544	56	45	-	1 jar	LF	☐	Bongo 14 13
			19:50	BO			48° 44.317	125° 15.605			-	1 bag		☐	with RBR on
			19:52	EN			48° 44.339	125° 15.120			-			☐	fluorometer side
40		30	:		Midwater trawl		° .	° .			-			☐	
41		31	15:36	BE	CTD		48° 27.349	125° 28.032	153	148	-		8N	☐	CTD 15
			15:39	BO			48° 27.353	125° 28.060			-			☐	
			15:43	EN			48° 27.350	125° 28.055			-			☐	
			:				° .	° .			-			☐	
42		31	15:45	BE	NET		48° 27.364	125° 28.069	152	140	-	1 jar	MT LF	☐	Bongo 14
			15:49	BO			48° 27.384	125° 28.125			-	1 bag		☐	with RBR on
			15:51	EN			48° 27.404	125° 28.194			-			☐	fluorometer side

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Notes:

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DAILY SCIENCE LOG

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Page 6 of 9

Month		July		Year		2015		Vessel		Ruber		Cruise ID		2015-12	
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	Trms/Fl Cleaned	Comments
44		31	20:43	BE	CTD		43° 34.471	124° 44.552	83	73	-	-	SN	☐	CTD 16
			20:45	BO			43° 34.159	124° 44.544			-			☐	
			20:47	EN			43° 34.147	124° 44.533			-			☐	
			:				°	°			-			☐	
45		31	20:51	BE	NET		43° 34.123	124° 44.520	85	75	-	1 jar	WT	☐	Bongo UNH 15
			20:53	BO			43° 34.113	124° 44.516			-	1 bag		☐	with RBK on fluorometer side
			20:54	EN			43° 34.113	124° 44.529			-			☐	
			:				°	°			-			☐	
46		1	16:47	BE	CTD		43° 23.752	125° 1.162	192	187	-	1	SK	☐	CTD 17
			16:52	BO			43° 23.773	125° 1.156			-			☐	Salinity sample
			16:57	EN			43° 23.782	125° 1.194			-			☐	
			:				°	°			-			☐	
47		1	17:00	BE	NET		48° 23.787	125° 01.233	186	175	-	1 jar	WT	☐	Bongo UNH (16)
			17:05	BO			48° 23.812	125° 01.265			-	1 bag	LF	☐	with RBK on fluorometer side
			17:08	EN			48° 23.834	125° 01.290			-			☐	
			:				°	°			-			☐	
48	LA06	1	19:20		CTD		48° 12.649	125° 16.987	113	109	-	-	CF	☐	CTD 18
			19:23				48° 12.685	125° 16.954			-			☐	
			19:26				48° 12.701	125° 16.922			-			☐	

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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
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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Version: 14 February 2013

3110

Set 52 = trawl

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Vessel			Cruise ID						
August			2015			RICKER			2015-12						
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
49	LADG	1	19:29	BE	BONGO		48° 12.755	125° 16.888	115	105	-	1 jar	MT, LF	☐	BONGOVH 17
			19:31	BP	↓		48° 12.792	125° 16.858			-	1 bag		☐	with RBR on
			19:34	ED	↓		48° 12.831	125° 16.814			-			☐	flownetside
			:				° .	° .			-			☐	
50		1	22:13	BE	CTD		48° 0.457	125° 35.944	203		-	1	SR	☐	(TD) 19
			22:17	BP	↓		48° 6.432	125° 35.550		198	-			☐	
			22:20	ED	↓		48° 0.437	125° 36.010			-			☐	
			:				° .	° .			-			☐	
51		1	22:24	BE	NET		48° 00.451	125° 36.048	206	195	-	1 jar	MT, LF	☐	BONGOVH 18
			22:29	BP	↓		48° 00.462	125° 36.090			-	1 bag		☐	with RBR on
			22:33	ED	↓		48° 00.501	125° 36.155			-			☐	flownetside
			:				° .	° .			-			☐	
53		2	19:46	BE	CTD		48° 13.743	125° 32.279	152	147	-	—	SR	☐	CTD 20
			19:49	BP			48° 13.742	125° 32.280			-			☐	
			19:52	ED			48° 13.747	125° 32.286			-			☐	
			:				° .	° .			-			☐	
54		2	22:23	BE	CTD		48° 24.912	125° 25.303	145	40	-		SR	☐	GOLNO test (TD 21)
			23:09	ED			48° 24.663	125° 25.672			-			☐	Cast
			:				° .	° .			-			☐	

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:
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Version: 14 February 2013

* Stop CTD at 1km for 10m bottle

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			Year			Vessel			Cruise ID			2015-12		
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
55		2	23:21		CTD		48° 24.637 125° 25.757	134	24	-	/	SR	☐	Gono; CTD 22
			23:56				48° 24.676 125° 25.880			-		JB	☐	test 2
			:				° °			-			☐	
57	72	3	18:38	BE	CTD		48° 18.552 124° 3.995	185		-	1	SR	☐	SAB/Chandler
			18:41	BO			48° 18.625 124° 4.093		181	-	(Lydsk)		☐	Sta 72 / CTD 23
			18:46	EN			48° 18.676 124° 4.174			-	1		☐	Bottle on 10m
			:				° °			-			☐	
58	72	3	18:55	BE	NET		48° 18.681 124° 04.233	185	170	-	1000	LF/MT	☐	Borgo UNT 19
			19:00	BO			48° 18.693 124° 04.247			-			☐	with RSR on flowmeter side
			19:03	EN			48° 18.707 124° 04.275			-			☐	
59	72	3	19:13	BE	CTD		48° 18.694 124° 4.224	187	182	-	1	SR	☐	Very old salinity on CTD
			19:17	BO			48° 18.694 124° 4.226			-	1	SR	☐	back to normal
			19:23	EN			48° 18.693 124° 4.241			-			☐	~14m. / CTD 24
			:				° °			-			☐	
60	SS	4	1:00	BE	CTD		48° 38.428N 123° 13.194	249	243	-	1		☐	Bottle @ CTD 25 10m
			1:08	BO			48° 38.533 123° 13.160			-	1		☐	
			1:15	EN			48° 38.760 123° 13.074			-			☐	
			:				° °			-			☐	

CTD Transducer and Fluorometer to be cleaned before each cast -- do not use ammonia products

Event Type:

LOOP = Sea Water Loop

BOT = Bottle cast (no CTD)

CTD = Standalone CTD

ROS = CTD in Rosette

SET = Fish Set

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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Version: 14 February 2013

Ocean Sciences Division, Institute of Ocean Sciences

DAILY SCIENCE LOG

Month			Year			Vessel			Cruise ID							
August			2015			P-101			2015-12							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information	Latitude	Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
61	59	4	01:19	BE	NET	mess	48° 38.761	123° 13.019	222	210	-	-	1 jar	Mr LF	☐	Bongo VNA 20
			01:26	BO			48° 38.785	123° 13.078			-	-	1 bag		☐	strong current
			01:31	EN			48° 38.871	123° 13.132			-	-			☐	difficult to keep net vertical
			:				°	°			-	-			☐	RBR on flow meter side
62	6201	4	13:59	BE	CTD		49° 14.976	123° 46.414	404	400	-	-	1c	SP	☐	Wks. chk. phyto
			14:07	BO			49° 14.945	123° 46.361			-	-	10m		☐	ORAC
			14:14	EN			49° 14.934	123° 46.369			-	-			☐	
			:				°	°			-	-			☐	
63	6201	4	14:17	BE	NET		49° 14.931	123° 46.367	402	250	-	-	1 bag	LF	☐	Bongo VNA
			14:22	BO			49° 14.939	123° 46.384			-	-	1 jar		☐	Bongo 21
			14:26	EN			49° 14.954	123° 46.392			-	-			☐	RBR on flow meter side
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	
			:				°	°			-	-			☐	

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

Event Type:
BOT = Bottle cast (no CTD)
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