

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2013-65

DATE:

From: OCT 15/13

To: NOV 9/13

VESSEL:

W. E. RICKER

PROJECT(S):

TRUDEL / HI SEAS SALMON

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

WaterProperties.ca

Captain: BRIAN PENNELL First Officer: _____

Second Officer: NIKI Third Officer: _____

Fishing Master: RYAN Chief Engineer: _____

Mission Participants / Agencies:

PBS 105 SFU

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

1st Leg Scientific Personnel: John Morris
Chief Scientist: John Morris

Name	Watch	Cabin	Name	Watch	Cabin
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MARY THIES

STRAHAY

Time

Hugh

2nd Leg Scientific Personnel: Chief Scientist: **MARC TRÜDEL**

Name	Watch	Cabin	Name	Watch	Cabin
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TYLER ZUBKOWSKI

LONG
MAYAN

High
MAGNET

51404

CAW

we

**** 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: Dell

Data acquisition program: _____

CTD deck unit make: SBC model: 11 serial number: 0424

Primary CTD

Make: SBC model: 9 serial number: 506

Primary temperature serial number: 2038

Primary conductivity serial number: 1763

Secondary temperature serial number: 4083

Secondary conductivity serial number: 3394

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model WET LABS Cable gain: 1.3 x 10 s/n: 2215 P S or NO pump?

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

Oxygen sensor: SBC Model: 43 s/n: 1438 P S or NO pump?

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

Other sensors: PH - SBC s/n: 0051 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)

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Month <u>OCTOBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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	JF01	16	14:10	BC	CTD		48° 17.40	123° 39.92	165		-	1	H.M.	☒	T: 9.62 S: 31.46
			14:13	BO			48° 17.42	123° 39.99		150	-			☐	BOT @ 10m SAL/CHL/NO3
			14:17	EN			48° 17.46	123° 40.00			-			☐	
002			14:20	BC	NET		48° 17.41	123° 39.87		150	-			☐	BONGO
003			14:44	BC	TRAWL		48° 17.93	123° 41.59			-			☐	TRAWL
004	JF02	16	15:48	BC	CTD		48° 20.44	123° 50.97	129		-	1	H.M.	☐	T: 10.25 S: 31.14
			15:50	BO			48° 20.45	123° 50.90		120	-			☐	BOT @ 10m SAL/CHL/NO3
			15:53	EN			48° 20.46	123° 50.99			-			☐	PUMP OFF UNTIL 60m ↑
005			:	BC	NET		48° 20.60	123° 51.04		120	-			☐	BONGO
006			16:10	BC	TRAWL		48° 20.74	123° 52.63			-			☐	TRAWL
			:				.	.			-			☐	
007	JF03	16	17:42	BC	CTD		48° 23.35	124° 04.95	100		-	1	H.M.	☐	T: 10.13 S: 31.45
			17:44	BO			48° 23.36	124° 04.97		95	-			☐	BOT @ 10m SAL/CHL/NO3
			17:47	EN			48° 23.37	124° 04.99			-			☐	
008			17:53	BC	NET		48° 23.37	124° 05.02		95	-			☐	BONGO
009			18:13	BC	TRAWL		48° 23.74	124° 06.22			-			☐	TRAWL
			:				.	.			-			☐	
			:				.	.			-			☐	
			:				.	.			-			☐	

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>OCTOBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICHER</u>			Cruise ID <u>2013-65</u>						
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010	IF 4	16	19:23	BC	CTD		48° 25.70	124° 11.90	90		-	1	H.M.	☐ ☐	T: 10.31 S: 31.37
			19:24	BO			48° 25.70	124° 11.86		80	-			☐ ☐	BOTOM - SAL/CAL/NUTS
			19:27	EN			48° 25.69	124° 11.75			-			☐ ☐	
011			19:32	BC	NET		48° 25.70	124° 11.52		75	-			☐ ☐	BONGO
012			20:14	BC	TRAWL		48° 25.37	124° 9.835			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
013	IF 5	16	21:38	BC	CTD		48° 28.46	124° 20.65	77		-	1	H.M.	☐ ☐	T: 10.53 S: 31.36
			21:40	BO			48° 28.46	124° 20.62		70	-			☐ ☐	BOTOM - SAL/CAL/NUTS
			21:42	EN			48° 28.45	124° 20.57			-			☐ ☐	
014			21:47	BC	NET		48° 28.44	124° 20.44		70	-			☐ ☐	BONGO
015			22:00	BC	TRAWL		48° 28.47	124° 21.32			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
016	IF 6	16	23:17	BC	CTD		48° 31.21	124° 30.60	99		-	1	H.M.	☐ ☐	T: 10.51 S: 31.45
			23:19	BO			48° 31.19	124° 30.58		90	-			☐ ☐	BOTOM - SAL/CAL/NUTS
			23:21	EN			48° 31.19	124° 30.55			-			☐ ☐	
017			23:22	BC	NET		48° 31.15	124° 30.48		90	-			☐ ☐	BONGO
018			23:42	BC	TRAWL		48° 31.29	124° 31.6			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>OCTOBER</u>				Year <u>2013</u>		Vessel <u>W.E. RICKER</u>				Cruise ID <u>2013-65</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
019	VI 01	17	14:11	BC	CTD		48° 57. 84	125° 06. 87	93		-	1	H.K.	☒	T: 12.86 S: 30.79
			14:13	BO			48° 57. 84	125° 06. 87		85	-			☐	BOT@10m. SAL/CHL/NTS
			14:15	EN			48° 57. 84	125° 06. 88			-			☐	
020			14:21	BC	NET		48° 57. 83	125° 06. 89			-			☐	BONGO
021			14:39	BC	TRAWL		48° 57. 21	125° 7. 32			-			☐	TRAWL
			:				°	°			-			☐	
022	VI 02	17	15:32	BC	CTD		48° 54. 74	125° 12. 53	96		-	1	H.K.	☐	T: 13.67 S: 30.48
			15:34	BO			48° 54. 74	125° 12. 55		85	-			☐	BOT@10m. SAL/CHL/NTS
			15:36	EN			48° 54. 72	125° 12. 56			-			☐	
023			15:42	BC	NET		48° 54. 70	125° 12. 60			-			☐	BONGO
024			16:00	BC	TRAWL		48° 54. 13	125° 13. 14			-			☐	TRAWL
			:				°	°			-			☐	
025	VI 01	17	16:56	BC	CTD		48° 50. 25	125° 16. 01	99		-	1	H.K.	☐	T: 12.75 S: 30.89
			16:58	BO			48° 50. 23	125° 16. 01		90	-			☐	BOT@10m. SAL/CHL/NTS
			17:01	EN			48° 50. 22	125° 16. 02			-			☐	
026			17:06	BC	NET		48° 50. 19	125° 16. 05			-			☐	BONGO
027			17:25	BC	TRAWL		48° 49. 39	125° 16. 665			-			☐	TRAWL
			:				°	°			-			☐	
			:				°	°			-			☐	

Event Type:

BOT = Bottle cast (no CTD)
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Bottle Firing Method:

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Notes:

Time Code:

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Month OCTOBER				Year 2013			Vessel W.E. RICHER			Cruise ID 2013-65					Page 7 of 7	
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	
028	V1 02	17	18:55	BE	CTD		48° 47. 21	125° 22. 14	90		-	1	H.M.	☐ ☐	T: 13.64 S: 30.52	
			18:58	BO			48° 47. 20	125° 22. 13		80	-			☐ ☐	BOT@10m: SAL/CHL/HUTS	
			19:00	EN			48° 47. 19	125° 22. 12			-			☐ ☐		
029			19:04	BE	NET		48° 47. 17	125° 22. 18			-			☐ ☐	BONGO	
030			19:26	BE	TRAWL		48° 47. 245	125° 22. 11			-			☐ ☐	TRAWL	
			:				°	°			-			☐ ☐		
031	V1 03	17	20:54	BE	CTD		48° 41. 01	125° 34. 32	175		-	1	H.M.	☐ ☐	T: 12.16 S: 31.16	
			20:56	BO			48° 40. 98	125° 34. 30		165	-			☐ ☐	BOT@10m: SAL/CHL/HUTS	
			21:00	EN			48° 40. 98	125° 34. 28			-			☐ ☐		
032			21:05	BE	NET		48° 40. 99	125° 34. 28		150	-			☐ ☐	BONGO	
033			21:21	BE	TRAWL		48° 40. 43	125° 35. 13			-			☐ ☐	TRAWL	
			:				°	°			-			☐ ☐		
034	V1 04	17	22:42	BE	CTD		48° 35. 46	125° 43. 54	64		-	1	H.M.	☐ ☐	T: 11.91 S: 31.28	
			22:43	BO			48° 35. 48	125° 43. 55		55	-			☐ ☐	BOT@10m: SAL/CHL/HUTS	
			22:45	EN			48° 35. 49	125° 43. 57			-			☐ ☐		
035			22:50	BE	NET		48° 35. 53	125° 43. 61			-			☐ ☐	BONGO	
036			23:08	BE	TRAWL		48° 34. 95	125° 44. 61			-			☐ ☐	TRAWL	
			:				°	°			-			☐ ☐		
			:				°	°			-			☐ ☐		
Event Type: LOOP - Sea Water Loop Bottle Firing Method: Time Code:																

Event Type:

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Notes:

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Month			Year			Vessel			Cruise ID						
OCTOBER			2013			W.E. RICHER			2013-65						
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
037	V1 05	18	01:13	BC	CTD	2 nd	48° 31.58	125° 51.68	85		-	1	H.M.	☐ ☐	T: 12.49 S: 31.89
			01:15	BO			48° 31.59	125° 51.68		75	-			☐ ☐	BOTBOM - SAL/CHL/NUIS
			01:17	CH			48° 31.59	125° 51.60			-			☐ ☐	
038			01:21	BC	NET	3 rd	48° 31.58	125° 51.68			-			☐ ☐	BONGO
039			00:29	BC	TRAWL	1 st	48° 29.39	125° 51.42			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
040	V1 06	18	14:13	BC	CTD		49° 05.70	126° 01.66	41		-	1	H.M.	☐ ☒	T: 13.10 S: 30.27
			14:14	BO			49° 05.70	126° 01.63		35	-			☐ ☐	BOTBOM - SAL/CHL/NUIS
			14:16	CH			49° 05.70	126° 01.67			-			☐ ☐	
041			14:19	BC	NET		49° 05.68	126° 01.69		35	-			☐ ☐	BONGO
042			14:38	BC	TRAWL		49° 05.11	126° 02.87			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
043	V1 07	18	15:32	BC	CTD		49° 03.27	126° 06.48	58		-	1	H.M.	☐ ☐	T: 13.16 S: 30.63
			15:33	BO			49° 03.29	126° 06.49		50	-			☐ ☐	BOTBOM - SAL/CHL/NUIS
			15:35	CH			49° 03.30	126° 06.51			-			☐ ☐	
044			15:41	BC	NET		49° 03.35	126° 06.54			-			☐ ☐	BONGO
045			16:31	BC	TRAWL		49° 03.26	126° 07.28			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>OCTOBER</u>			Year <u>2013</u>			Vessel <u>WE RICKER</u>			Cruise ID <u>2013 65</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
046	V1 08	18	17:38	BE	CTD		48° 59.32	126° 12.89	98		-	1	H.M.	☐ ☐	T: 12.86 S: 30.77
			17:40	BO			48° 59.31	126° 12.88		90	-			☐ ☐	Bottom SAL/CHL/NOTS
			17:42	CM			48° 59.31	126° 12.86			-			☐ ☐	
047			17:46	BE	NET		48° 59.33	126° 12.86			-			☐ ☐	BONGO
048			18:04	BE	TRAWL		48° 59.11	126° 13.12			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
049	V1 09	18	19:11	BE	CTD		48° 55.12	126° 19.59	141		-	1	H.M.	☐ ☐	T: 12.57 S: 30.76
			19:13	BO			48° 55.12	126° 19.60		130	-			☐ ☐	Bottom SAL/CHL/NOTS
			19:17	CM			48° 55.09	126° 19.62			-			☐ ☐	
050			19:22	BE	NET		48° 55.07	126° 19.65			-			☐ ☐	BONGO
051			19:41	BE	TRAWL		48° 54.52	126° 20.50			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
052	V1 10	18	20:57	BE			48° 55.85	126° 26.11	158		-	1	H.M.	☐ ☐	T: 12.97 S: 30.86
			21:00	BO			48° 55.84	126° 26.17		150	-			☐ ☐	Bottom SAL/CHL/NOTS
			21:03	CM			48° 55.82	126° 26.21			-			☐ ☐	
053			21:07	BE			48° 55.79	126° 26.24			-			☐ ☐	BONGO
054			21:28	BE			48° 56.35	126° 26.704			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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							Latitude	Longitude							
055	V1 11	18	22:47	BE	CTD		49° 03.74	126° 28.89	135		-	1	H.M.	☐ ☐	T: 12.78 S: 30.82
			22:49	BO			49° 03.74	126° 28.91		125	-			☐ ☐	BOT@10m SAL/CAL/NUTS
			22:52	EN			49° 03.74	126° 28.92			-			☐ ☐	
056			22:56	BE	NET		49° 03.75	126° 28.97			-			☐ ☐	BONGO
057			23:16	BE	TRAWL		49° 04.44	126° 29.34			-			☐ ☐	TRAWL
			:				.	.			-			☐ ☐	
058	V1 12	18	01:25	BE	CTD	2 nd	49° 15.86	126° 29.34	71		-	1	H.M.	☐ ☐	T: 13.37 S: 30.23
			01:27	BO			49° 15.87	126° 29.36		60	-			☐ ☐	BOT@10m SAL/CAL/NUTS
			01:28	EN			49° 15.98	126° 29.39			-			☐ ☐	
059			01:33	BE	NET	3 rd	49° 15.91	126° 29.48			-			☐ ☐	BONGO
060			00:35	BE	TRAWL	1 st	49° 12.52	126° 29.59			-			☐ ☐	TRAWL
			:				.	.			-			☐ ☐	
061	EP01	19	14:10	BE	CTD		49° 20.49	126° 32.96	44		-	1	H.M.	☐ ☒	T: 13.18 S: 30.17
			14:11	BO			49° 20.48	126° 32.98		35	-			☐ ☐	BOT@10m SAL/CAL/NUTS
			14:13	EN			49° 20.49	126° 32.99			-			☐ ☐	
062			14:17	BE	NET		49° 20.50	126° 33.06			-			☐ ☐	BONGO
063			14:33	BE	TRAWL		49° 20.05	126° 34.17			-			☐ ☐	TRAWL
			:				.	.			-			☐ ☐	
			:				.	.			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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ROS = CTD in Rosette
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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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Month <u>OCTOBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
064	EP 02	19	15:23	BE	CTD		49° 18. 81	126° 37. 01	90		-	1	H.M.	☐ ☐	T: 13.15 S: 30.16
			15:24	BO			49° 18. 84	126° 37. 03		80	-			☐ ☐	Boreion. SAL/CAL/HUTS
			15:27	EN			49° 18. 87	126° 37. 05			-			☐ ☐	
065			15:30	BE	NET		49° 18. 92	126° 37. 07			-			☐ ☐	BONGO
066			15:49	BE	TRAWL		49° 18. 87	126° 37. 83			-			☐ ☐	TRAWL
			:				° .	° .			-			☐ ☐	
067	EP 03	19	16:37	BE	CTD		49° 16. 75	126° 41. 52	113		-	1	H.M.	☐ ☐	T: 13.03 S: 30.30
			16:39	BO			49° 16. 77	126° 41. 54		105	-			☐ ☐	Boreion. SAL/CAL/HUTS
			16:42	EN			49° 16. 80	126° 41. 55			-			☐ ☐	
068			16:46	BE	NET		49° 16. 84	126° 41. 57			-			☐ ☐	BONGO
069			17:05	BE	TRAWL		49° 16. 57	126° 42. 39			-			☐ ☐	TRAWL
			:				° .	° .			-			☐ ☐	
070	EP 04	19	17:54	BE	CTD		49° 14. 73	126° 45. 37	122		-	1	H.M.	☐ ☐	T: 13.05 S: 30.68
			17:56	BO			49° 14. 70	126° 45. 36		115	-			☐ ☐	Boreion. SAL/CAL/HUTS
			17:59	EN			49° 14. 69	126° 45. 35			-			☐ ☐	
071			18:02	BE	NET		49° 14. 67	126° 45. 25			-			☐ ☐	BONGO
072			18:21	BE	TRAWL		49° 14. 02	126° 46. 16			-			☐ ☐	TRAWL
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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Bottle Firing Method:

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Notes:

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Month OCTOBER				Year 2013			Vessel W.E. RICHER			Cruise ID 2013-65					
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
073	EP 05	19	19:05	BE	CTD		49° 12.20	126° 49.83	146		-	1	H.M.	☐ ☐	T: 13.03 S: 30.80
			19:07	BO			49° 12.20	126° 49.86		135	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			19:11	EN			49° 12.19	126° 49.85			-			☐ ☐	
074			19:15	BE	NET		49° 12.19	126° 49.80			-			☐ ☐	BONGO
075			19:37	BE	TRAWL		49° 11.47	126° 50.96			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
076	EP 06	19	20:30	BE	CTD		49° 09.89	126° 54.96	199		-	1	H.M.	☐ ☐	T: 12.70 S: 31.07
			20:34	BO			49° 09.90	126° 54.94		189	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			20:38	EN			49° 09.88	126° 54.92			-			☐ ☐	
077			20:42	BE	NET		49° 09.87	126° 54.92			-			☐ ☐	BONGO
078			21:02	BE	TRAWL		49° 09.53	126° 56.01			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
079	EP 07	19	21:57	BE			49° 08.75	126° 59.60	435		-	1	H.M.	☐ ☐	T: 12.65 S: 31.14
			22:01	BO			49° 08.71	126° 59.58		250	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			22:06	EN			49° 08.69	126° 59.57			-			☐ ☐	
080			22:10	BE			49° 08.67	126° 59.54			-			☐ ☐	BONGO
081			22:31	BE			49° 09.28	126° 59.94			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

BOT = Bottle cast (no CTD)
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Bottle Firing Method:

US = Up / Stop (default)
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Notes:

Time Code:

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Month OCTOBER				Year 2013			Vessel W.E. RICKER			Cruise ID 2013-65					
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
082	V1 13	20	14:04	BE	CTD		49 ° 45.02	127 ° 10.31	70		-	1	H.M.	☒ ☐	T: 13.37 S: 30.50
			14:06	BO			49 ° 45.02	127 ° 10.33		60	-			☐ ☐	BOTOM - SAL/CHL/NOTS
			14:07	EN			49 ° 45.02	127 ° 10.35			-			☐ ☐	
083			14:10	BE	NET		49 ° 45.03	127 ° 10.39		60	-			☐ ☐	BONGO
084			14:28	BE	TRAWL		49 ° 45.58	127 ° 11.76			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
085	V1 14	20	15:33	BO	CTD		49 ° 49.80	127 ° 19.84	70		-	1	H.M.	☐ ☐	T: 13.33 S: 30.48
			15:35	BO			49 ° 49.82	127 ° 19.87		70	-			☐ ☐	BOTOM - SAL/CHL/NOTS
			15:37	EN			49 ° 49.84	127 ° 19.89			-			☐ ☐	
086			15:40	BE	NET		49 ° 49.97	127 ° 19.96		60	-			☐ ☐	BONGO
087			15:55	BE	TRAWL		49 ° 50.24	127 ° 21.06			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
088	V1 15	20	17:09	BO	CTD		49 ° 55.24	127 ° 30.07	66		-	1	H.M.	☐ ☐	T: 13.26 S: 30.52
			17:10	BO			49 ° 55.25	127 ° 30.09		60	-			☐ ☐	BOTOM - SAL/CHL/NOTS
			17:12	EN			49 ° 55.25	127 ° 30.11			-			☐ ☐	
089			17:16	BE	NET		49 ° 55.28	127 ° 30.14		55	-			☐ ☐	BONGO
090			17:32	BE	TRAWL		49 ° 55.36	127 ° 31.23			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Month <u>OCTOBER</u>			Year <u>2013</u>			Vessel <u>W.C. RICKER</u>			Cruise ID <u>2013-65</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
091	V116	20	18:49	BC	CTD		50° 00.01	127° 40.40	86		-	1	H.M.	☐ ☐	T: 13.39 S: 30.48
			18:51	BO			50° 00.03	127° 40.44		75	-			☐ ☐	BOT@10m. SAL/CHL/NUTS
			18:53	CH			50° 00.05	127° 40.46			-			☐ ☐	
092			18:57	BC	NET		50° 00.07	127° 40.53		75	-			☐ ☐	BONGO
093			19:16	BC	TRAWL		50° 00.21	127° 42.07			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
094	V117	20	20:52	BC	CTD		50° 04.88	127° 59.95	179		-	1	H.M.	☐ ☐	T: 13.29 S: 30.36
			20:55	BO			50° 04.92	128° 00.01		170	-			☐ ☐	BOT@10m. SAL/CHL/NUTS
			20:59	CH			50° 04.96	128° 00.03			-			☐ ☐	
095			21:03	BC	NET		50° 05.01	128° 00.15		150	-			☐ ☐	BONGO
096			20:29	BC	TRAWL		50° 06.40	128° 00.55			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
097	V118	20	22:20	BC	CTD		50° 10.33	127° 59.89	88		-			☐ ☐	T: 12.98 S: 30.33
			22:22	BO			50° 10.37	127° 59.88		80	-			☐ ☐	BOT@10m. SAL/CHL/NUTS
			22:25	CH			50° 10.41	127° 59.87			-			☐ ☐	
098			22:28	BC	NET		50° 10.48	127° 59.85		75	-			☐ ☐	BONGO
099			22:45	BC	TRAWL		50° 11.35	127° 59.30			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Month <u>OCTOBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
100	V119	20	01:19	BE	CTD	2 nd	50°23.98	128°11.61	126		-	1	H.M.	☐ ☐	T: 11.98 S: 31.31
			01:22	BO			50°23.99	128°11.63		115	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			01:24	EN			50°24.03	128°11.67			-			☐ ☐	
101			01:28	BE	NET	3 rd	50°24.08	128°11.76		115	-			☐ ☐	BONGO
102			00:34	BE	TRAWL	1 st	50°21.57	128°09.78			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
103*	QCSD 01	21	14:08	BE	CTD		50°53.51	128°13.03	41		-	1	H.M.	☒ ☐	T: 10.78 S: 32.02
			14:09	BO			50°53.51	128°13.03		35	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			14:11	EN			50°53.51	128°13.04			-			☐ ☐	
104			14:15	BE	NET		50°53.51	128°13.05		30	-			☐ ☐	BONGO
105			14:30	BE	TRAWL		50°53.44	128°13.85			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
106	QCSD 02	21	15:40	BE	CTD		50°53.71	128°24.44	54		-	1	H.M.	☐ ☐	T: 10.34 S: 32.09
			15:41	BO			50°53.72	128°24.45		45	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			15:42	EN			50°53.72	128°24.47			-			☐ ☐	
107			15:57	BE	NET		50°53.79	128°24.35		45	-			☐ ☐	BONGO
108			16:13	BE	TRAWL		50°53.923	128°25.404			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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Month			Year			Vessel			Cruise ID						Page		of	
OCTOBER			2013			W. E. RICKER			2013-65						13		13	
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			
109	V1 20	21	18:09	BE	CTD		50° 44.32	128° 30.23	83		-	1	H.M.	☐ ☐	T: 11.85 S: 31.44			
			18:11	BO			50° 44.34	128° 30.25		75	-			☐ ☐	BOT@10m. SAL/CHL/NUIS			
			18:13	EN			50° 44.35	128° 30.26			-			☐ ☐				
110			18:16	BE	NET		50° 44.40	128° 30.26		70	-			☐ ☐	BONGO			
111			18:36	BE	TRAWL		50° 43.64	128° 29.96			-			☐ ☐	TRAWL			
			:				°	°			-			☐ ☐				
112	V1 21	21	19:41	BE	CTD		50° 38.21	128° 29.99	123		-	1	H.M.	☐ ☐	T: 11.86 S: 31.45			
			19:43	BO			50° 38.23	128° 30.01		115	-			☐ ☐	BOT@10m. SAL/CHL/NUIS			
			19:45	EN			50° 38.26	128° 30.03			-			☐ ☐				
113			19:49	BE	NET		50° 38.28	128° 30.07		115	-			☐ ☐	BONGO			
114			20:09	BE	TRAWL		50° 37.8	128° 29.53			-			☐ ☐	TRAWL			
			:				°	°			-			☐ ☐				
115	V1 22	21	21:19	BE	CTD		50° 33.05	128° 23.74	146		-	1	H.M.	☐ ☐	T: 12.19 S: 31.22			
			21:22	BO			50° 33.09	128° 23.76		135	-			☐ ☐	BOT@10m. SAL/CHL/NUIS			
			21:25	EN			50° 33.11	128° 23.79			-			☐ ☐				
116			21:30	BE	NET		50° 33.14	128° 23.84		135	-			☐ ☐	BONGO			
117			21:50	BE	TRAWL		50° 32.85	128° 23.24			-			☐ ☐	TRAWL			
			:				°	°			-			☐ ☐				
			:				°	°			-			☐ ☐				
Event Type: LOOP = Sea Water Loop Bottle Firing Method: Firing Sequence: Firing Interval: Firing Duration: Firing Frequency: Firing Rate: Firing Time: Firing Date: Firing Location: Firing Status: Firing Comments: Firing Notes: Firing Details: Firing Information: Firing Data: Firing Results: Firing Analysis: Firing Conclusions: Firing Recommendations: Firing Action: Firing Plan: Firing Strategy: Firing Tactics: Firing Techniques: Firing Procedures: Firing Protocols: Firing Guidelines: Firing Standards: Firing Best Practices: Firing Quality Assurance: Firing Quality Control: Firing Quality Improvement: Firing Quality Management: Firing Quality System: Firing Quality Culture: Firing Quality Mindset: Firing Quality Awareness: Firing Quality Commitment: Firing Quality Responsibility: Firing Quality Accountability: Firing Quality Transparency: Firing Quality Openness: Firing Quality Honesty: Firing Quality Integrity: Firing Quality Trust: Firing Quality Respect: Firing Quality Compassion: Firing Quality Kindness: Firing Quality Patience: Firing Quality Tolerance: Firing Quality Understanding: Firing Quality Empathy: Firing Quality Sympathy: Firing Quality Support: Firing Quality Encouragement: Firing Quality Motivation: Firing Quality Inspiration: Firing Quality Creativity: Firing Quality Innovation: Firing Quality Improvement: Firing Quality Excellence: Firing Quality Perfection: Firing Quality Mastery: Firing Quality Expertise: Firing Quality Skill: Firing Quality Knowledge: Firing Quality Wisdom: Firing Quality Understanding: Firing Quality Insight: Firing Quality Intuition: Firing Quality Instinct: Firing Quality Gut Feeling: Firing Quality Hunch: Firing Quality Suspicion: Firing Quality Doubt: Firing Quality Uncertainty: Firing Quality Risk: Firing Quality Danger: Firing Quality Threat: Firing Quality Challenge: Firing Quality Obstacle: Firing Quality Barrier: Firing Quality Hurdle: Firing Quality Obstacle: Firing Quality Barrier: Firing Quality Hurdle: Firing 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Bottle Firing Method:

US = Up / Stop (default)
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Notes:

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Month <u>OCT / NOV</u>				Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
118	V123	21	23:05	BE	CTD		50° 29.27	128° 14.39	47		-	1	H.M.	☐	T: 12.02 S: 31.13
			23:06	BO			50° 29.27	128° 14.40		38	-			☐	Bottle on SAL/CHL/NOTS
			23:07	EN			50° 29.28	128° 14.41			-			☐	
119			23:12	BE	NET		50° 29.29	128° 14.43		35	-			☐	BONGO
120			23:52	BE	TRAWL		50° 28.67	128° 13.91			-			☐	TRAWL
			:				°	°			-			☐	
121	V13	22	14:13	BE	CTD		50° 29.65	127° 45.13	110		-	1	H.M.	☒	T: 11.52 S: 30.90
			14:16	BO			50° 29.66	127° 45.13		100	-			☐	Bottle on SAL/CHL/NOTS
			14:18	EN			50° 29.67	127° 45.13			-			☐	
122			14:21	BE	NET		50° 29.67	127° 45.19		100	-			☐	BONGO
123			14:41	BE	TRAWL		50° 29.96	127° 44.14			-			☐	TRAWL
			:				°	°			-			☐	
124	V14		15:25	BE	TRAWL		50° 30.33	127° 44.14			-			☐	TRAWL
			:				°	°			-			☐	
125	QCST01	3	14:59	BE	CTD		50° 41.07	126° 56.15	173		-	1	H.M.	☒	T: 8.89 S: 31.10
			15:02	BO			50° 41.06	126° 56.12		165	-			☐	Bottle on SAL/CHL/NOTS
			15:09	EN			50° 41.05	126° 56.09			-			☐	
126			15:11	BE	NET		50° 41.07	126° 56.11		150	-			☐	BONGO
127			15:35	BE	TRAWL		50° 41.09	126° 51.50	0		-			☐	TRAWL #1 *

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Bottle Firing Method:

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Notes:

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*TOW ONLY 2 MINS - DOLPHINS AT SHIP

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Month <u>November</u>			Year <u>2013</u>			Vessel <u>W.C. RICKER</u>			Cruise ID <u>2013-65</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							
128	QCST 02	03	16:39	BC	CTD		50° 43. 91	126° 54. 32	140		-	1	H.M.	☐ ☐	T: 8.8 S: 31.51
			16:42	BO			50° 43. 90	126° 54. 29		130	-			☐ ☐	BOT@10m - SAL/CHL/NOTS
			16:45	EM			50° 43. 91	126° 54. 26			-			☐ ☐	
129			16:49	BC	NET		50° 43. 92	126° 54. 20			-			☐ ☐	BONGO
130			17:10	BC	TRAWL		50° 43. 63	126° 55. 18		0	-			☐ ☐	TRAWL #1
131	QCST 03	03	17:55	BC	TRAWL		50° 42. 58	126° 58. 64		15	-			☐ ☐	TRAWL #2
132	QCST 04	03	18:39	BC	TRAWL		50° 42. 84	126° 57. 35		30	-			☐ ☐	TRAWL #3
133	QCST 05	03	19:16	BC	NET		50° 42. 27	126° 59. 83		125	-			☐ ☐	BONGO
134	QCST 05	03	19:33	BC	CTD		50° 42. 42	126° 59. 91	194		-	1	H.M.	☐ ☐	T: 8.86 S: 31.06
			19:37	BO			50° 42. 42	126° 59. 90		185	-			☐ ☐	BOT@10m - SAL/CHL/NOTS
			19:40	EM			50° 42. 43	126° 59. 90			-			☐ ☐	
135	QCST 05	03	19:56	BC	TRAWL		50° 42. 47	126° 59. 56		45	-			☐ ☐	TRAWL #4
136	QCST 06	03	20:40				50° 42. 89	126° 57. 88		60	-			☐ ☐	TRAWL #5
			:				.	.			-			☐ ☐	
137	QCST 07	03	21:37	BC	CTD		50° 44. 68	127° 03. 59	138		-	1	H.M.	☐ ☐	T: 8.96 S: 31.19
			21:40	BO			50° 44. 69	127° 03. 62		130	-			☐ ☐	BOT@10m - SAL/CHL/NOTS
			21:43	EM			50° 44. 71	127° 03. 66			-			☐ ☐	
138			21:53	BC	NET		50° 44. 76	127° 03. 78		125	-			☐ ☐	BONGO
139			22:09	BC	TRAWL		50° 44. 94	127° 04. 86		0	-			☐ ☐	TRAWL #1

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Month <u>NOVEMBER</u>				Year <u>2013</u>		Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
140	QCST 08	03	22:51	BE	TRAWL		50° 44.97	127° 07.99		15	-			☐ ☐	TRAWL #2
141	QCST 09	03	23:34	BE	TRAWL		50° 44.85	127° 05.95		30	-			☐ ☐	TRAWL #3
142	QCST 10	04	00:17	BE	TRAWL		50° 44.67	127° 09.14		45	-			☐ ☐	TRAWL #4
143	QCST 11	04	01:29	BE	TRAWL		50° 44.62	127° 06.19		60	-			☐ ☐	TRAWL #5
144	QCST 11	04	02:08	BE	CTD		50° 44.43	127° 09.35	170		-	1	H.M.	☐ ☐	T: 8.97 S: 31.18
			02:11	BO			50° 44.44	127° 09.45		160	-			☐ ☐	BOTOM. SAL/CHL/NOTS
			02:14	EN			50° 44.45	127° 09.54			-			☐ ☐	
145			02:26	BE	NET		50° 44.48	127° 09.69		150	-			☐ ☐	BONGO
			:				°	°			-			☐ ☐	
146	QCST 12	04	15:11	BE	CTD		50° 41.00	127° 11.80	89		-	1	H.M.	☐ ☐	T: 8.96 S: 31.52
			15:13	BO			50° 41.02	127° 11.78		80	-			☐ ☐	BOTOM. SAL/CHL/NOTS
			15:15	EN			50° 41.03	127° 11.75			-			☐ ☐	
147			15:20	BE	NET		50° 41.05	127° 11.70		75	-			☐ ☐	BONGO
148	QCST 13	12	15:39	BE	TRAWL		50° 41.48	127° 12.64		0	-			☐ ☐	TRAWL #1
149	QCST 14	13	16:26	BE	TRAWL		50° 42.68	127° 15.21		15	-			☐ ☐	TRAWL #2
150	QCST 15	14	17:08	BE	TRAWL		50° 41.87	127° 13.9		30	-			☐ ☐	TRAWL #3
151	QCST 16	15	17:58	BE	TRAWL		50° 42.64	127° 15.13		45	-			☐ ☐	TRAWL #4
152	QCST 17	16	18:33	BE	TRAWL		50° 41.02	127° 12.79		60	-			☐ ☐	TRAWL #5
			:				°	°			-			☐ ☐	

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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/FI Cleaned	Comments
153	QCST 18	04	19:21	BE	CTD		50° 42. 74	127° 14. 98	153		-	1	H.m.	☐ ☐	T: 8.88 S: 31.32
	16		19:24	BO			50° 42. 75	127° 14. 96		140	-			☐ ☐	BOTE 10m - SAL/CAL/NOTS
			19:27	EN			50° 42. 74	127° 14. 93			-			☐ ☐	
154			19:36	BE	NET		50° 42. 74	127° 14. 92		140	-			☐ ☐	BONGO
			:				°	°			-			☐ ☐	
155	QCST 19	04	20:37	BE	CTD		50° 44. 16	127° 15. 69	132		-	1	H.m.	☐ ☐	T: 8.91 S: 31.29
	17		20:40	BO			50° 49. 15	127° 15. 66		120	-			☐ ☐	BOTE 10m - SAL/CAL/NOTS
			20:42	EN			50° 49. 14	127° 15. 67			-			☐ ☐	
156			20:46	BE	NET		50° 49. 14	127° 15. 67			-			☐ ☐	BONGO
157	QCST 19	17	21:07	BE	TRAWL		50° 49. 59	127° 15. 96		0	-			☐ ☐	TRAWL #1
158	QCST 20	18	21:50	BE	TRAWL		50° 50. 69	127° 18. 42		15	-			☐ ☐	TRAWL #2
159	QCST 21	19	22:32	BE	TRAWL		50° 50. 19	127° 17. 94		30	-			☐ ☐	TRAWL #3
160	QCST 22	20	23:16	BE	TRAWL		50° 51. 14	127° 19. 85		45	-			☐ ☐	TRAWL #4
161	QCST 23	21	00:00	BE	TRAWL		50° 50. 68	127° 19. 49		60	-			☐ ☐	TRAWL #5
162	" 24	05	00:39	BE	CTD		50° 52. 38	127° 22. 08	150		-	1	H.m.	☐ ☐	T: 8.84 S: 31.25
			00:42	BO			50° 52. 43	127° 22. 14		140	-			☐ ☐	BOTE 10m - SAL/CAL/NOTS
			00:45	EN			50° 52. 47	127° 22. 20			-			☐ ☐	
163	"		00:51	BE	NET		50° 52. 55	127° 22. 07		140	-			☐ ☐	BONGO
			:				°	°			-			☐ ☐	

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Month			NOVEMBER		Year		2013		Vessel		W.E. RICKER		Cruise ID		2013-65		Page		10		or	
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							
164	QCST 24	05	14:58	BC	CTD		50° 46.28	127° 24.86	273		-	1	H.M.	☐ ☒	T: 8.07 S: 31.68							
	22		15:02	BO			50° 46.31	127° 24.92		250	-			☐ ☐	Bottom for SAL/CHL/NTS							
			15:07	CH			50° 46.33	127° 24.96			-			☐ ☐								
165			15:12	BC	NET		50° 46.37	127° 25.05		150	-			☐ ☐	Bottom							
166	22		15:36	BC	TRAWL		50° 46.18	127° 24.27		0	-			☐ ☐	TRAWL #1							
167	QCST 25	05	16:36	BC	TRAWL		50° 45.92	127° 23.42		15	-			☐ ☐	TRAWL #2							
			:				.	.			-			☐ ☐								
168	QCST 26	05	18:04	BC	CTD		50° 49.27	127° 10.57	161		-	1	H.M.	☐ ☐	T: 8.71 S: 31.50							
	23		18:07	BO			50° 49.27	127° 10.50		150	-			☐ ☐	Bottom. SAL/CHL/NTS							
			18:10	CH			50° 49.28	127° 10.43			-			☐ ☐								
169			18:23	BC	NET		50° 49.33	127° 10.41		150	-			☐ ☐	Bottom							
170	QCST 26	24	18:38	BC	TRAWL		50° 49.15	127° 09.25			-			☐ ☐	TRAWL #1							
171	QCST 27	25	19:19	BC	TRAWL		50° 48.91	127° 07.22			-			☐ ☐	TRAWL #2							
172	QCST 28	26	20:08	BC	TRAWL		50° 49.28	127° 09.12			-			☐ ☐	TRAWL #3							
173	QCST 29	27	20:49	BC	TRAWL		50° 48.76	127° 07.23			-			☐ ☐	TRAWL #4							
174	QCST 30	28	21:32	BC	TRAWL		50° 49.09	127° 08.50			-			☐ ☐	TRAWL #5							
175	QCST 30	29	22:08	BC	CTD		50° 48.11	127° 06.28	178		-	1	H.M.	☐ ☐	T: 8.76 S: 31.50							
			22:11	BO			50° 48.08	127° 06.24		176	-			☐ ☐	Bottom. SAL/CHL/NTS							
			22:15	CH			50° 48.05	127° 06.19			-			☐ ☐	*→							
Event Types: LOOP - Sea Water Loop, BATH - Bath Thermometer, CHL - Chlora, NTS - Nucleic Acid, SAL - Salinity, CHL - Chlorophyll, NTS - Nucleic Acid																						

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CALLID QCST 31 IN FILE SHOULD BE QCST 30

#175 = QCST 30 #177 = QCST 31

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Month <u>NOVEMBER</u>				Year <u>2013</u>		Vessel <u>W. E. BECKER</u>				Cruise ID <u>2013-65</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
176	QCST 30	05	22:19	BE	NET		50° 48.02	127° 06.17		150	-			☐ ☐	BONGO
	28		:				°	°			-			☐ ☐	
177	QCST 31	29	23:11	BE	CTD		50° 46.15	126° 58.98	206		-	1	H.M.	☐ ☐	T: 8.74 S: 31.58
			23:14	BO			50° 46.14	126° 58.98		195	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			23:18	EN			50° 46.13	126° 58.97			-			☐ ☐	
178			23:22	BE	NET		50° 46.13	126° 58.95		150	-			☐ ☐	BONGO
179	QCST 29	05	23:42	BE	TRAWL		50° 45.66	126° 57.80			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
180	QCST 30	06	01:45	BE	CTD	2ND	50° 40.90	126° 52.68	188		-			☐ ☐	T: 8.65 S: 31.68
			01:49	BO			50° 40.93	126° 52.74		175	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			01:52	EN			50° 40.96	126° 52.80			-			☐ ☐	
181			01:57	BE	NET	3RD	50° 41.01	126° 52.91		150	-			☐ ☐	BONGO
182			00:35	BE	TRAWL	1ST	50° 43.05	126° 54.02			-			☐ ☐	TRAWL
			:				°	°			-			☐ ☐	
183	JS01	06	14:59	BE	CTD		50° 30.38	126° 26.24	344		-	1	H.M.	☒ ☐	T: 9.12 S: 31.10
			15:03	BO			50° 30.37	126° 26.34		250	-			☐ ☐	BOT@10m - SAL/CHL/NTS
			15:08	EN			50° 30.36	126° 26.35			-			☐ ☐	
183	} oops		15:13	BE	NET		50° 30.34	126° 26.47		150	-			☐ ☐	BONGO
183			15:34	BE	TRAWL		50° 30.32	126° 25.85		0	-			☐ ☐	TRAWL #1

Event Type:

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Bottle Firing Method:

US = Up / Stop (default)
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Notes:

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

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Month			Year			Vessel			Cruise ID						
NOVEMBER			2013			W.E. RICKER			2013-65						
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
184	JS 02	06	16:17	BC	TRAWL		50°30.26	126°25.57		15	-			☐ ☐	TRAWL # 2
185	JS 03		16:59	BC	TRAWL		50°30.34	126°24.73		30	-			☐ ☐	TRAWL # 3
186	JS 04		17:40	BC	TRAWL		50°30.26	126°27.74		45	-			☐ ☐	TRAWL # 4
187	JS 05	✓	18:18	BC	TRAWL		50°30.31	126°26.04		60	-			☐ ☐	TRAWL # 5
188	JS 65		19:09	BC	CTD		50°30.26	126°24.22	330		-	1		☐ ☐	T: 9.14 S: 31.10
	JS 02 m		19:14	BO			50°30.26	126°24.38		250	-			☐ ☐	BOT@10m. SAL/CHL/NOTS
			19:18	EN			50°30.25	126°24.46			-			☐ ☐	
189			19:22	BC	NET		50°30.23	126°24.54		150	-			☐ ☐	BONGO
			:				.	.			-			☐ ☐	
190	JS 06	6	20:07	BC	CTD		50°29.33	126°19.97	363		-	1		☐ ☐	T: 9.10 S: 31.23
			20:11	BS			50°29.32	126°19.99		250	-			☐ ☐	BOT@10m. SAL/CHL/NOTS
			20:16	EN			50°29.31	126°20.02			-			☐ ☐	
191			20:20	BC	NET		50°29.31	126°20.08		150	-			☐ ☐	BONGO
192	JS 06	6	20:40	BC	TRAWL		50°29.14	126°18.85		0	-			☐ ☐	TRAWL # 1
193	JS 07		21:25	BC	TRAWL		50°28.89	126°16.45		15	-			☐ ☐	TRAWL # 2
194	JS 08		22:10	BC	TRAWL		50°29.19	126°18.84		30	-			☐ ☐	TRAWL # 3
195	JS 09		22:53	BC	TRAWL		50°28.89	126°17.41		45	-			☐ ☐	TRAWL # 4
196	JS 10		23:38	BC	TRAWL		50°29.21	126°19.63		60	-			☐ ☐	TRAWL # 5
			:				.	.			-			☐ ☐	

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Month <u>NOVEMBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
197	JS 10	07	00:20	BE	CTD		50° 29.07	126° 15.97	363		-	1	H.M.	☐ ☐	T: 9.13 S: 31.17
			00:25	BO			50° 29.08	126° 15.97		250	-			☐ ☐	BOTOM - SAL/CAL/NOTS
			00:30	EN			50° 29.06	126° 15.93			-			☐ ☐	
198			00:33	BE	NET		50° 29.07	126° 15.99		150	-			☐ ☐	BONGO
			:				°	°			-			☐ ☐	
199	JS 11	07	14:56	BE	CTD		50° 22.24	125° 20.99	209		-	1	H.M.	☐ ☒	T: 9.35 S: 29.82
			14:59	BO			50° 22.26	125° 21.05		200	-			☐ ☐	BOTOM - SAL/CAL/NOTS
			15:03	EN			50° 22.29	125° 21.07			-			☐ ☐	
200			15:09	BE	NET		50° 22.31	125° 21.08		150	-			☐ ☐	BONGO
201	JS 11	07	15:32	BE	TRAWL		50° 22.80	125° 21.19		0	-			☐ ☐	TRAWL #1
202	JS 12		16:15	BE	TRAWL		50° 21.32	125° 23.42		15	-			☐ ☐	TRAWL #2
203	JS 13		17:01	BE	TRAWL		50° 22.65	125° 21.32		30	-			☐ ☐	TRAWL #3
204	JS 14		17:41	BE	TRAWL		50° 21.53	125° 22.97		45	-			☐ ☐	TRAWL #4
205	JS 15		18:26	BE	TRAWL		50° 22.34	125° 21.46		60	-			☐ ☐	TRAWL #5
206	JS 15	07	19:04	BE	CTD		50° 21.40	125° 23.90	266		-	1	H.M.	☐ ☐	T: 9.31 S: 29.80
			19:08	BO			50° 21.39	125° 23.94		250	-			☐ ☐	BOTOM - SAL/CAL/NOTS
			19:13	EN			50° 21.38	125° 23.97			-			☐ ☐	
207		07	19:19	BE	NET		50° 21.36	125° 24.03		150	-			☐ ☐	BONGO
			:				°	°			-			☐ ☐	

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Month <u>NOVEMBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
208	JS 16	07	20:10	BC	CTD		50° 17.46	125° 24.34	174		-	1	H.M.	☐ ☐	T: 9.40 S: 29.90
			20:13	BO			50° 17.48	125° 24.42		165	-			☐ ☐	BOT@10m - SAL/CHL/NUIS
			20:17	CM			50° 17.50	125° 24.52			-			☐ ☐	
209			/	BC	NET		/	/			-			☐ ☐	BONGO
210	JS 16		20:29	BC	TRAWL		50° 17.08	125° 24.19		0	-			☐ ☐	TRAWL #1
211	JS 17		21:11	BC	TRAWL		50° 16.05	125° 23.05		15	-			☐ ☐	TRAWL #2
212	JS 18		21:56	BC	TRAWL		50° 16.98	125° 24.03		30	-			☐ ☐	TRAWL #3
213	JS 19		22:38	BC	TRAWL		50° 16.27	125° 23.29		45	-			☐ ☐	TRAWL #4
214	JS 20		23:21	BC	TRAWL		50° 16.90	125° 23.78		60	-			☐ ☐	TRAWL #5
			:				.	.			-			☐ ☐	
215	JS 20	08	00:01	BC	CTD		50° 15.21	125° 22.82	235		-	1	H.M.	☐ ☐	T: 9.39 S: 29.89
			00:05	BO			50° 15.19	125° 22.83		225	-			☐ ☐	BOT@10m - SAL/CHL/NUIS
			00:09	CM			50° 15.17	125° 22.86			-			☐ ☐	
216	JS 20		00:13	BC	NET		50° 15.17	125° 22.86		150	-			☐ ☐	BONGO
			:				.	.			-			☐ ☐	
217	D, 01		15:13	BC	CTD		50° 01.24	125° 07.89	174		-	1	H.M.	☐ ☒	T: 9.12 S: 28.68
			15:15	BO			50° 01.25	125° 07.88		165	-			☐ ☐	BOT@10m - SAL/CHL/NUIS
			15:19	CM			50° 01.25	125° 07.87			-			☐ ☐	
218			15:23	BC	NET		50° 01.26	125° 07.87		150	-			☐ ☐	BONGO

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Month <u>NOVEMBER</u>			Year <u>2013</u>			Vessel <u>W.E. RICKER</u>			Cruise ID <u>2013-65</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
219	D1 01	08	15:43	BE	TRAWL		50° 01.75	125° 08.30		0	-			☐ ☐	TRAWL #1
220	D1 02		16:23	BE	TRAWL		50° 03.08	125° 09.07		15	-			☐ ☐	TRAWL #2
221	D1 03		17:03	BE	TRAWL		50° 02.12	125° 08.27		30	-			☐ ☐	TRAWL #3
222	D1 04	✓	17:45	BE	TRAWL		50° 02.52	125° 08.82		45	-			☐ ☐	TRAWL #4
223	D1 05	08	18:27	BE	TRAWL		50° 02.13	125° 08.08		60	-			☐ ☐	TRAWL #5
			:				.	.			-			☐ ☐	
224	D1 05	08	19:03	BE	CTD		50° 03.80	125° 08.71	192		-	1	A.M.	☐ ☐	T: 8.83 S: 28.47
			19:06	BO			50° 03.84	125° 08.72		180	-			☐ ☐	BOTE 10 - SAL/CAL/NOTS
			19:10	EN			50° 03.88	125° 08.73			-			☐ ☐	
225			19:14	BE	NET		50° 03.90	125° 08.72		150	-			☐ ☐	BONGO
			:				.	.			-			☐ ☐	
226	D1 06	08	20:49	BE	CTD		50° 00.69	124° 53.96	183		-	1	A.M.	☐ ☐	T: 9.31 S: 28.57
			20:52	BO			50° 00.70	124° 53.92		175	-			☐ ☐	BOTE 10 - SAL/CAL/NOTS
			20:55	EN			50° 00.72	124° 53.86			-			☐ ☐	
227			21:00	BE	NET		50° 00.74	124° 53.86		150	-			☐ ☐	BONGO
228	D106		21:23	BE	TRAWL		50° 00.48	124° 52.78		0	-			☐ ☐	TRAWL #1
229	D1 07		22:04	BE	TRAWL		49° 59.38	124° 50.83		15	-			☐ ☐	TRAWL #2
230	D1 08	✓	23:06	BE	TRAWL		50° 00.46	124° 52.34		30	-			☐ ☐	TRAWL #3
231	D1 09		:	BE	TRAWL		° CANCELLED.			45	-			☐ ☐	TRAWL #4

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Month <u>NOVEMBER</u>				Year <u>2013</u>		Vessel <u>W. E. RICHER</u>		Cruise ID <u>2013-65</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
232	D110	08	:	BE	TRAWL		CAN. CELL CD.			60	-			☐ ☐	TRAWL #5
233	D110	09	00:14	BE	CTD		50° 00.88	124° 53.17	256		-	1	H.M.	☐ ☐	T:9.60 S:28.41
			00:19	BO			50° 00.96	124° 53.17		245	-			☐ ☐	BOTOM-SAL/CHL/HUTS
			00:23	EN			50° 00.99	124° 53.18			-			☐ ☐	
234	D110		00:28	BE	NET		53° 01.03	124° 50.19			-			☐ ☐	BONGO
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
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			:				° .	° .			-			☐ ☐	

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