DAILY SCIENCE LOG BOOK

MISSION NUMBER 2012-67

DATE: From: OCT 9 to: NOV 4

VESSEL: W.E. RICKER

PROJECT(S): MARC TRUDGL - HIGH SEAS SALMON

Book 1 of 2

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

WaterProperties.ca

Captain: SCOTT DOANE
First Officer: IAN COPPING
Second Officer: SCOTT M'COLL
Third Officer:
Fishing Master:

Mission Participants / Agencies: PBS / IOS / UVIC

Scientific Personnel: Chief Scientist: JOHN MORRIS

Name	Watch	Cabin	Name	Watch	Cabin
MARY THEISS					
YOHANN JUNG					
ERIC HERTZ					
JACKSON PRICE					
LOUISE DE MESTRAL BEZANSON					
HUGH MACLEAN					

Second leg of Mission: Chief Scientist:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: DELL
Data acquisition program: SEASAVE SBE 911 PLUS
CTD deck unit make: SBE model: 11 serial number: 0424

Primary CTD
Make: SBE model: 9 serial number: 443
Primary temperature serial number: 2106
Primary conductivity serial number: 1764
Secondary temperature serial number: 2710
Secondary conductivity serial number: 2128
Transmissometer: Model: s/n:
Fluorometer: Model WETLABS Cable gain: — s/n: 2216 **P, S or NO pump?**
Oxygen sensor: SBE Model: 43 s/n: 0997 **P, S or NO pump?**
PAR sensor: Model: s/n:
Other sensors: PH - SBE s/n: 0851 **P, S or NO pump?**
Other sensors: s/n: **P, S or NO pump?**
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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:
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:
Other sensors: s/n: **P, S or NO pump?**
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CTD calibration bottle location (height above CTD in metres):

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Month OCTOBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Flow Cleaned	Comments
10	JF 05	1408	BE	CTD		001	48° 31.23	124° 29.31	86			0	A.M.	✓	CALLED JF 01 in FILE
		1411	BO				48° 31.29	124° 29.30		75					SHOULD BE JF05
		1412	EN				48° 31.29	124° 29.30							
			BE	NET		002									BONGO
		1444	BE	TRAWL		003	48 31.40	124 30.58		SURFACE TOW					TRAWL
10	JF06	1604	BE	CTD		004	48° 33.39	124° 42.30	101						T: 9.82 S: 31.32
		1607	BO				48° 33.40	124° 42.31		90		0			
		1609	EN				48° 33.42	124° 42.30							
		1611	BE	NET		005	48° 33.42	124° 42.32							BONGO
		1620	BE	TRAWL		006	48 33.8	124 43.45		15M HEADROPE DEPTH					TRAWL
10	VI 01	1958	BE	CTD		007	48° 47.80	125° 23.01	91			0			T-9.74 S: 31.72
		2000	BO				48° 47.79	125° 23.03		81					
		2002	EN				48° 47.78	125° 23.05							
		2005	BE	NET		008	48° 47.75	125° 23.08							BONGO
		2020	BE	TRAWL		009	48 47.25	125 24.05		SURFACE TOW					TRAWL

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set
USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

Time Code:
BE = Beginning Time of Cast
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MR = Messenger Release Time
RE = Recover Mooring Time

Transmissometer to be cleaned before each cast, do not use Ammonia products

Notes: _____

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10	VI 02	2149	BE	CTD		010	48° 40.90	125° 35.75	144			0	H.M.		T: 10.96 S: 32.35
		2151	BO				48° 40.90	125° 35.79		135					
		2154	EN				48° 40.88	125° 35.80							
		2156	BE	NET		011	48° 40.86	125° 35.83							
		22:13	BE	TRAWL		012	48 40.41	125 36.76		15m	HEADROPE DEPTH				BONGO
															TRAWL
10	VI 03	2319	BE	CTD		013	48° 35.60	125° 42.90	61			0			T: 11.38 S: 32.32
		2320	BO				48° 35.59	125° 42.78		54					
		2321	EN				48° 35.59	125° 42.77							
		2323	BE	NET		014	48° 35.58	125° 42.73							
		2340	BE	TRAWL		015	48 35.125	125° 43.31		30m	HEADROPE DEPTH				BONGO
															TRAWL
11	VI 04	1409	BE	CTD		016	49° 06.07	126° 00.22	43			0		✓	T: 11.01 S: 31.57
		1411	BO				49° 06.09	126° 00.24		35					
		1412	EN				49° 06.10	126° 00.25							
		1415	BE	NET		017	49° 06.15	126° 00.25							
		1431	BE	TRAWL		018	49 05.86	126 1.32		SURFACE	TOW				BONGO
															TRAWL

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11	V1 05	1526	BE	CTD		019	49° 03.40	126° 06.13	56			0	A.M.		T: 9.73 S: 31.76
		1528	BO				49° 03.43	126° 06.13		50					
		1529	EN				49° 03.45	126° 06.13							
		1533	BE	NET		020	49° 03.50	126° 06.13							BONGO
		15 51	BE	TRAWL		021	49 03.045	126 06.99	15 m	HEADROPE DEPTH					TRAWL
11	V1 06	1655	BE	CTD		022	48° 59.73	126° 12.00	90			0			T: 9.71 S: 31.67
		1657	BO				48° 59.79	126° 12.02		80					
		1700	EN				48° 59.86	126° 12.00							
		1703	BE	NET		023	48° 59.91	126° 11.99							BONGO
		17:22	BE	TRAWL		024	48 59.8	126 12.97		SOREACH	TOWN				TRAWL
11	V1 07	1825	BE	CTD		025	48° 55.48	126° 18.94	137			0			T: 10.20 S: 32.24
		1829	BO				48° 55.48	126° 18.96		130					
		1833	EN				48° 55.48	126° 18.97							
		18	BE	NET		026	49° 55.	126° 18.							BONGO
		1903	BE	TRAWL		027	48 55.05	126 19.83	30 m	HEADROPE DEPTH					TRAWL

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11	V1 08	2003	BE	CTD		028	48° 51.39	126° 24.24	172			0	H.M.		T: 10.69 S: 31.75
		2007	BO				48° 51.39	126° 24.23		165					
		2010	EN				48° 51.40	126° 24.21							
		2013	BE	NET		029	48° 51.41	126° 24.22		150					BONGO
		2033	BE	TRAWL		030	48 50.85	126 24.66	SURFACE		TOW				TRAWL
11	V109	2323	BE	CTD		031	49° 09.52	126° 23.33	89			0			T: 9.54 S: 32.4
		2326	BO				49° 09.53	126° 23.29		80					
		2327	EN				49° 09.55	126° 23.29							
		2330	BE	NET		032	49° 09.57	126° 23.26							BONGO
		2344	BE	TRAWL		033	49 10.33	126 23.33	SURFACE		TOW				TRAWL
12	EP 01	1403	BE	CTD		034	49° 20.44	126° 32.95	46			1		✓	T: 10.59 S: 31.64
		1405	BO				49° 20.48	126° 32.95		40					BOT @ 10m. SAL / CHL / NUTS
		1407	EN				49° 20.48	126° 32.98							
		1410	BE	NET		035	49° 20.45	126° 33.00		36					BONGO
		1420	BE	TRAWL		036	49 20.16	126 33.68	55	SURFACE	TOW				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
12	EP02	1520	BE	CTD		037	49° 19.03	126° 36.28	85			1	H.M.		T: 10.24 S: 31.69
		1522	BO				49° 19.05	126° 36.31		80					BOTRION. SAL/CHL/NUTS
		1524	EN				49° 19.05	126° 36.34							
		1528	BE	NET		038	49° 19.09	126° 36.37		70					BONGO
		1552	BE	TRAWL		039	49 18.61	126 36.84	TOW	AT	15m				TRAWL
12	EP03	1643	BE	CTD		040	49° 16.90	126° 40.47	112			1			T: 9.73 S: 31.86
		1646	BO				49° 16.95	126° 40.50		105					BOTRION. SAL/CHL/NUTS
		1649	EN				49° 17.00	126° 40.55							
		1652	BE	NET		041	49° 17.01	126° 40.60		100					BONGO
		1713	BE	TRAWL		042	49 16.66	126 41 33	SURFACE		TOW				TRAWL
12	EP04	1801	BE	CTD		043	49° 14.58	126° 45.22	122			1			T: 9.85 S: 32.27
		1804	BO				49° 14.61	126° 45.25		115					BOTRION. SAL/CHL/NUTS
		1807	EN				49° 14.64	126° 45.27							
		1810	BE	NET		044	49° 14.69	126° 45.30		110					BONGO
		1859	BE	TRAWL		045	49 14.34	126 45.41	TOW	AT	30m.				TRAWL

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12	EP 05	1953	BE	CTD		046	49° 12.43	126° 49.68	142			1	H.M.		T: 9.71 S: 32.33
		1956	BO				49° 12.46	126° 49.70		135					BOT@10m · SAL/CHL/NUTS
		1959	EN				49° 12.48	126° 49.71							
		2001	BE	NET		047	49° 12.49	126° 49.72		130					BONGO
		2021	BE	TRAWL		048	49 12.22	126 50.59	TOW AT		SURFACE				TRAWL
12	EP 06	2107	BE	CTD		049	49° 10.64	126° 54.40	184			1			T: 10.52 S: 31.76
		2110	BO				49° 10.66	126° 54.41		175					BOT@10m · SAL/CHL/NUTS
		2114	EN				49° 10.68	126° 54.41							
		2117	BE	NET		050	49° 10.70	126° 54.41		150					BONGO
		2137	BE	TRAWL		051	49 10.26	126 55.11	TOW AT		15m				TRAWL
12	EP07	2227	BE	CTD		052	49° 08.23	126° 58.73	431			1			T: 10.84 S: 31.45
		2231	BO				49° 08.25	126° 58.72		250					BOT@10m · SAL/CHL/NUTS
		2236	EN				49° 08.27	126° 58.71							
		2239	BE	NET		053	49° 08.27	126° 58.71		150					BONGO
		2258	BE	TRAWL		054	49 08.89	126 58.67	TOW AT		30m				TRAWL

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13	V1 10	1406	BE	CTD		055	49° 32.24	127° 08.39	137			0	H.M.	✓	T: 10.93 S: 31.43
		1408	BO				49° 32.26	127° 08.42		130					
		1412	EN				49° 32.28	127° 08.45							
		1415	BE	NET		056	49° 32.34	127° 08.47		125					BONGO
		1436	BE	TRAWL		057	49 33.01	127 07.8	TOW AT SURFACE						TRAWL
13	V1 11	1530	BE	CTD		058	49° 35.57	127° 02.54	107			0			T: 9.78 S: 31.94
		1533	BO				49° 35.62	127° 02.62		100					
		1536	EN				49° 35.65	127° 02.67							
		1539	BE	NET		059	49° 35.68	127° 02.67		98					BONGO
		1558	BE	TRAWL		060	49 36.36	127 02.10	TOW AT 15 m						TRAWL
13	V1 12	1657	BE	CTD		061	49° 38.49	126° 56.97	47			0			T: 10.41 S: 31.62
		1658	BO				49° 38.47	126° 56.98		40					
		1659	EN				49° 38.47	126° 57.00							
		1702	BE	NET		062	49° 38.50	126° 57.02		37					BONGO
		1718	BE	TRAWL		063	49 38.87	127 58.21	TOW AT SURFACE						TRAWL

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13	VI 13	2006	BE	CTD		064	49°48.66	127°31.77	86			0	H.M.		T: 10.82 S: 31.42
		2008	BO				49°48.68	127°31.79		80					
		2010	EN				49°48.69	127°31.81							
		2014	BE	NET		065	49°48.71	127°31.82		75					BONGO
		2032	BE	TRAWL		066	49°49.22	127°31.17		TOW	AT SURFACE				TRAWL
13	VI 14	2132	BE	CTD		067	49°52.50	127°26.30	70			0			T: 11.08 S: 31.38
		2134	BO				49°52.51	127°26.34		60					
		2136	EN				49°52.52	127°26.37							
		2139	BE	NET		068	49°52.52	127°26.42							BONGO
		2155	BE	TRAWL		069	49°52.79	127°25.99		TOW	AT 15 M				TRAWL
13	VI 15	2300	BE	CTD		070	49°55.43	127°19.36	58			0			T: 11.45 S: 31.23
		2301	BO				49°55.43	127°19.35		50					
		2302	EN				49°55.44	127°19.34							
		2305	BE	NET		071	49°55.45	127°19.32		49					BONGO
		2322	BE	TRAWL		072	49°55.9	127°20.1		TOW	AT SURFACE				TRAWL

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14	1V1 01	1403	BE	CTD		073	50° 26.60	127° 31.11	189			0	H.M.	✓	T: 11.10 S: 29.23
		1408	BO				50° 26.64	127° 31.11		180					
		1413	EM				50° 26.69	127° 31.12							
		1415	BE	NET		074	50° 26.72	127° 31.07		150					BONGO
		1435	BE	TRAWL		075	50° 27.64	127 32.04	TOW	AT	SURFACE				TRAWL
14	1V1 02	1529	BE	CTD		076	50° 31.61	127° 37.20	93			0			T: 10.97 S: 31.77
		1531	BO				50° 31.61	127° 37.22		85					
		1533	EM				50° 31.61	127° 37.23							
		1535	BE	NET		077	50° 31.62	127° 37.26		84					BONGO
		1553	BE	TRAWL		078	50 31.63	127 38.05	TOW	AT	15m				TRAWL
14	1V1 03	1634	BE	CTD		079	50° 30.38	127° 41.52	137			0			T: 11.41 S: 29.16
		1637	BO				50° 30.35	127° 41.45		130					
		1640	EM				50° 30.35	127° 41.42							
		1643	BE	NET		080	50° 30.36	127° 41.37		119					BONGO
		1701	BE	TRAWL		081	50 30.24	127 42.31	TOW	AT	SURFACE				TRAWL

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Month OCTOBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	IV1 04	1750	BE	CTD		082	50° 28.52	127° 48.17	150			0	H.M.		T: 11.45 S: 27.43
		1754	BO				50° 28.48	127° 48.13		140					
		1757	EN				50° 28.45	127° 48.08							
		1759	BE	NET		083	50° 28.44	127° 48.05		150					BONGO
		1820	BE	TRAWL		084	50 28.66	127 48.71		TOW	AT 15M				TRAWL
14	IV1 05	1903	BE	CTD		085	50° 28.12	127° 53.30	150			0			T: 11.19 S: 31.72
		1907	BO				50° 28.10	127° 53.14		170					
		1910	EN				50° 28.09	127° 53.03							
		1913	BE	NET		086	50° 28.08	127° 52.93							BONGO
		1930	BE	TRAWL		087	50 28.18	127 53.84		TOW	AT SURFACE.				TRAWL
14	IV1 06	2005	BE	CTD		088	50° 27.85	127° 56.87	228			0			T: 11.13 S: 31.61
		2010	BO				50° 27.86	127° 56.83		220					
		2014	EN				50° 27.86	127° 56.82							
		2017	BE	NET		089	50° 27.87	127° 56.82							BONGO
		2037	BE	TRAWL		090	50 27.46	127 57.27		TOW	AT 15M				TRAWL

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set
USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

Time Code:
BE = Beginning Time of Cast
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MR = Messenger Release Time
RE = Recover Mooring Time

Notes:

Transmissometer to be cleaned before each cast, do not use Ammonia products

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 16 April 2010

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Month OCTOBER **Year** 2012 **Ship** W.E. RICHER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	V1 16	2204	BE	CTD		091	50° 21.56	128° 05.67	91			0	H.M.		T: 10.97 S: 31.58
		2206	BO				50° 21.55	128° 05.72		70					
		2208	EN				50° 21.53	128° 05.74							
		2213	BE	NET		092	50° 21.57	128° 05.87		70					BONGO
		2231	BE	TRAWL		093	50 21.30	128 07.19		Tow AT 15m.					TRAWL
14	V1 17	2334	BE	CTD		094	50° 18.28	128° 11.92	174			0			T: 11.53 S: 31.87
		2337	BO				50° 18.34	128° 11.98		165					
		2341	EN				50° 18.38	128° 12.04							
		2344	BE	NET		095	50° 18.45	128° 12.12		150					BONGO
15		00:04	BE	TRAWL		096	50 18.50	128 13.30		Tow AT 15m					TRAWL
15	T 08	1403	BE	CTD		097	50° 42.42	129° 29.07	1096			1		✓	T: 11.21 S: 31.97
		1409	BO				50° 42.51	129° 29.04		250					BOT@10m. SOL/CHC/NUTS
		1417	EN				50° 42.66	129° 29.01							
		1420	BE	NET		098	50° 42.73	129° 28.93		150					BONGO
		1444	BE	TRAWL		099	50 43.44	129 28.34		Tow AT 15m					TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
15	T 07	1618	BE	CTD		100	50°49.38	129°13.54	108			1	H.M.		T: 10.30 S: 32.01
		1620	BO				50°49.49	129°13.48		90					ROTRIOM. SAL/CHL/NUTS
		1623	EN				50°49.62	129°13.40							
		1627	BE	NET		101	50°49.72	129°13.32		85					BONGO
		1647	BE	TRAWL		102	50 51.15	129 12.32		Tow	AT 15m				TRAWL
16	QCST 1	1425	BE	CTD	2ND	103	50°48.73	127°36.65	386			0			T: 9.75 S: 32.06
		1431	BO				50°48.66	127°36.62		250					
		1436	EN				50°48.59	127°36.62							
		1415	BE	NET	1ST	104	50°48.84	127°36.99		150					BONGO
		1447	BE	TRAWL	3RD	105	50 48.84	127 37.42		TOW	AT SURFACE.				TRAWL
16	QCST 02	1615	BE	CTD		106	50°53.75	127°37.81	436			0			T: 9.36 S: 32.21
		1620	BO				50°53.78	127°37.86		250					
		1625	EN				50°53.77	127°37.91							
		1627	BE	NET		107	50°53.78	127°37.92		150					BONGO
		1647	BE	TRAWL		108	50 54.29	127 38.54		TOW	AT 15.				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	QCST 03	1747	BE	CTD		109	50° 57.22	127° 44.21	290			0	H.M.		T: 9.02 S: 32.13
		1752	BO				50° 57.17	127° 44.26		250					
		1758	EN				50° 57.11	127° 44.28							
		1800	BE	NET		110	50° 57.12	127° 44.36		150					BONGO
		1820	BE	TRAWL		111	50 56.83	127 43.34		TOW	AT SURFACE				TRAWL
16	QCST 04	1932	BE	CTD		112	50° 57.28	127° 32.52	135			0			T: 8.67 S: 31.97
		1935	BO				50° 57.26	127° 32.52		125					
		1938	EN				50° 57.25	127° 32.50							
		1941	BE	NET		113	50° 57.24	127° 32.50		125					BONGO
		2002	BE	TRAWL		114	50 56.75	127 31.67		TOW	AT 15 M				TRAWL
16	QCST 05	2129	BE	CTD		115	50° 50.82	127° 18.61	133			0			T: 8.91 S: 30.95
		2132	BO				50° 50.80	127° 18.61		125					
		2135	EN				50° 50.79	127° 18.63							
		2137	BE	NET		116	50° 50.79	127° 18.69		123					BONGO
		2156	BE	TRAWL		117	50 50.32	127 19.58		TOW	AT SURFACE				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	QCST 06	2239	BE	CTD		118	50° 48.33	127° 22.97	224			0	H.M.		T: 8.72 S: 31.30
		2244	BO				50° 48.30	127° 23.07		215					
		2248	EN				50° 48.26	127° 23.15							
		2251	BE	NET		119	50° 48.24	127° 23.18		150					BONGO
		2309	BE	TRAWL		120	50 47.75	127 24.15		TOW AT	15m				TRAWL
17	QCST 07	1406	BE	CTD		121	50° 48.22	127° 35.09	372			0		✓	T: 9.26 S: 32.09
		1412	BO				50° 48.25	127° 35.08		250					
		1418	EN				50° 48.30	127° 35.03							
		1420	BE	NET		122	50° 48.31	127° 34.97		150					BONGO
		1444	BE	TRAWL		123	50 48.34	127 34.13		TOW AT	SURFACE				TRAWL
17	QCST 08	1622	BE	CTD		124	50° 45.36	127° 17.82	248			0			T: 8.50 S: 31.62
		1628	BO				50° 45.45	127° 17.68		235					
		1634	EN				50° 45.51	127° 17.59							
		16	BE	NET		125	50° 45	127° 17							BONGO
		16 58	BE	TRAWL		126	50 45.99	127 16.78		TOW AT	30m				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	QCST 09	1756	BE	CTD		127	50° 47.78	127° 11.06	156			0	H.M.		T: 8.46 S: 31.40
		1759	BO				50° 47.84	127° 11.02		145					
		1803	EN				50° 47.87	127° 10.98							
		1805	BE	NET		128	50° 47.89	127° 10.99		146					BONGO
		1828	BE	TRAWL		129	50 48 74	127 10.28		TOW	AT SURFACE.				TRAWL
17	QCST 10	1924	BE	CTD		130	50° 50.10	127° 08.52	146			0			T: 8.44 S: 31.42
		1927	BO				50° 50.11	127° 08.50		135					
		1929	EN				50° 50.13	127° 08.50							
		1931	BE	NET		131	50° 50.15	127° 08.50		130					BONGO
		1949	BE	TRAWL		132	50 49.83	127 07.81		TOW	AT 15m.				TRAWL
17	QCST 11	2054	BE	CTD		133	50° 46.55	127° 00.49	161			0			T: 8.38 S: 31.71
		2056	BO				50° 46.56	127° 00.46		150					
		2059	EN				50° 46.55	127° 00.47							
		2103	BE	NET		134	50° 46.56	127° 00.50		150					BONGO
		2120	BE	TRAWL		135	50 46.08	127 01.24		TOW	AT SURFACE.				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	QCST 12	2213	BE	CTD		136	50° 42.94	127° 01.41	161			0	H.M.		T: 8.40 S: 31.61
		2216	BO				50° 43.00	127° 01.31		155					
		2219	EN				50° 43.03	127° 01.26							
		2222	BE	NET		137	50° 43.05	127° 01.18		150					BONGO
		2240	BE	TRAWL		138	50 43.26	127 02.13		TOW	AT 15 m.				TRAWL
17	QCST 13	2331	BE	CTD		139	50° 42.47	127° 07.67	161			0			T: 8.72 S: 31.95
		2335	BO				50° 42.54	127° 07.64		150					
		2337	EN				50° 42.56	127° 07.62							
		2340	BE	NET		140	50° 42.55	127° 07.64							BONGO
		2359	BE	TRAWL		141	50 42.4	127 08.52		TOW	AT 30m.				TRAWL
18	QCST 14	1407	BE	CTD		142	50° 42.12	126° 55.68	196			0		✓	T: 8.56 S: 31.93
		1411	BO				50° 42.15	126° 55.66		195					
		1414	EN				50° 42.13	126° 55.67							
		1417	BE	NET		143	50° 42.14	126° 55.62		150					BONGO
		1436	BE	TRAWL		144	50 42.69	126 55.515		TOW	AT SURFACE				TRAWL

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Time Code:
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DE = Deployment Time
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Notes:

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COMFIRM # 2450

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month OCTOBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
18	QCST 15	1541	BE	CTD		145	50° 45.36	126° 50.26	160			0	H.M		T: 8.48 S: 30.88
		1545	BO				50° 45.42	126° 50.36		150					
		1548	EN				50° 45.46	126° 50.39							
		1550	BE	NET		146	50° 45.45	126° 50.45							BONGO
		1602	BE	TRAWL		147	50 45.2	126 50.2		TOW AT 15m					TRAWL
18	QCST 16	1724	BE	CTD		148	50° 41.54	126° 46.88	132			0			T: 8.34 S: 31.79
		1727	BO				50° 4.64	126° 46.88		120					
		1730	EN				50° 41.68	126° 46.88							
		1732	BE	NET		149	50° 41.72	126° 46.08		115					BONGO
		1749	BE	TRAWL		150	50 41.3	126 47.0		TOW AT 30m					TRAWL
18	QCST 17	1903	BE	CTD		151	50° 40.93	126° 51.25	186			0			T: 8.39 S: 32.02
		1907	BO				50° 40.92	126° 51.26		175					
		1911	EN				50° 40.91	126° 51.27							
		1915	BE	NET		152	50° 40.91	126° 51.27		150					BONGO
		1932	BE	TRAWL		153	50 40.27	126 50.5		TOW AT SURFACE					TRAWL

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Month | **Year** | **Ship** | **Cruise ID**

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
18	QCST 18	2024	BE	CTD		154	50° 36.73	126° 48.21	87			0	H.M.		T: 8.54 S: 31.68
		2026	BO				50° 36.75	126° 48.20		80					
		2028	EN				50° 36.75	126° 48.19							
		2030	BE	NET		155	50° 36.75	126° 48.17		80					BONGO
		2047	BE	TRAWL		156	50 36.61	126 49.31			TOW AT	15m			TRAWL
18	JS 01	2207	BE	CTD		157	50° 33.36	126° 48.14	423			0			T: 8.72 S: 31.52
		2213	BO				50° 33.40	126° 48.10		250					
		2218	EN				50° 33.38	126° 48.12							
		2221	BE	NET		158	50° 33.39	126° 48.12		150					BONGO
		2241	BE	TRAWL		159	50 33.21	126 46.87			TOW AT	SURFACE			TRAWL
18	JS02	2354	BE	CTD		160	50° 30.58	126° 37.69	445			0			T: 8.73 S: 31.30
		2359	BO				50° 30.65	126° 37.71		250					
19		0004	EN				50° 30.67	126° 37.71							
		0007	BE	NET		161	50° 30.68	126° 37.70		150					BONGO
		0025	BE	TRAWL		162	50 30.86	126 39.05			TOW AT	15m.			TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
19	T 06	1407	BE	CTD		163	50° 55.47	129° 00.34	60			1	H.M	✓	T: 10.43 S: 32.15
		1408	BO				50° 55.43	129° 00.35		50					BOTTLE 10m - SAL/CHL/NUTS
		1410	EN				50° 55.39	129° 00.36							
		1413	BE	NET		164	50° 55.32	129° 00.39		50					BONGO
		1433	BE	TRAWL		165	50° 55.5	128 59.6		TOW AT SURFACE.					TRAWL
19	T 05	1544	BE	CTD		166	51° 00.02	128° 52.10	61			1			T: 9.90 S: 32.12
		1546	BO				51° 00.01	128° 52.10		50					BOTTLE 10m - SAL/CHL/NUTS
		1548	EN				51° 00.03	128° 52.15							
		1551	BE	NET		167	51° 00.02	128° 52.17		50					BONGO
		1636	BE	TRAWL		168	51 00.3	128 51.7		TOW AT 15 M.					TRAWL
19	T 04	1718	BE	CTD		169	51° 04.60	128° 43.70	61			1			T: 9.74 S: 32.24
		1720	BO				51° 04.60	128° 43.69		50					BOTTLE 10m - SAL/CHL/NUTS
		1722	EN				51° 04.59	128° 43.68							
		1725	BE	NET		170	51° 04.60	128° 43.69							BONGO
		1739	BE	TRAWL		171	51 05.1	128 42.8		TOW AT SURFACE					TRAWL

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Time Code:
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RE = Recover Mooring Time

Notes:

Transmissometer to be cleaned before each cast, do not use Ammonia products

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 16 April 2010

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month OCTOBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
19	T 03	1845	BE	CTD		172	51° 08.35	128° 36.12	137			1	H M.		T: 9.34 S: 32.31
		1847	BO				51° 08.37	128° 36.11		125					BOTTOM. SAL/CHL/NUTS
		1851	EN				51° 08.39	128° 36.06							
		1853	BE	NET		173	51° 08.41	128° 36.05		128					BONGO
		1912	BE	TRAWL		174	51 08.97	128 34.96			TOW AT 15 m.				TRAWL
19	T 02	2013	BE	CTD		175	51° 12.53	128° 28.12	192			1			T: 9.94 S: 32.20
		2016	BO				51° 12.57	128° 29.08		186					BOTTOM. SAL/CHL/NUTS
		2020	EN				51° 12.60	128° 28.06							
		2022	BE	NET		176	51° 12.62	128° 28.05		150					BONGO
		2041	BE	TRAWL		177	51 13.13	128 27.17			TOW AT SURFACE				TRAWL
19	T01	2138	BE	CTD		178	51° 16 49	128° 20.13	79			1			T: 9.87 S: 32.11
		2139	BO				51° 16.51	128° 20.10		70					BOTTOM. SAL/CHL/NUTS
		2141	EN				51° 16.51	128° 20.06							
		2146	BE	NET		179	51° 16.52	128° 20.18		70					BONGO
		2221	BE	TRAWL		180	51 16 19	128 19.38			TOW AT 15 m				TRAWL

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set
USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
28	DC 01	2225	BE	CTD		181	52° 54.46	129° 18.77	255			1	H.M.	✓	T: 8.09 S: 29.12
		2230	BO				52° 54.43	129° 18.86		245					BOTELION - SAL/CHL/NUTS
		2235	EN				52° 54.40	129° 18.95							
		2238	BE	NET		182	52° 54.38	129° 18.99		150					BONGO
		2257	BE	TRAWL		183	52 54.6	129 18.68			TOW AT SURFACE				TRAWL
28	DC 02	2343	BE	CTD		184	52° 55.24	129° 17.31	232			1			T: 7.75 S: 29.41
		2347	BO				52° 55.18	129° 17.37		220					BOTELION - SAL/CHL/NUTS
		2352	EN				52° 55.12	129° 17.45							CTD ONLY STATION
29	DC 03	0135	BE	CTD	2ND	185	53° 03.20	129° 17.82	523			1			T: 7.76 S: 29.31
		0140	BO				53° 03.18	129° 17.94		250					BOTELION - SAL/CHL/NUTS
		0145	EN				53° 03.16	129° 17.86							
		0147	BE	NET	3RD	186	53° 03.17	129° 17.87		150					BONGO
		0051	BE	TOW	1ST	187	53 1.7	129 16.6			TOW AT 15m				TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
29	DC 04	1404	BE	CTD		188	53° 23.42	129° 10.85	309			1	HM	✓	T: 7.76 S: 29.67
		1408	BO				53° 23.44	129° 10.85		250					BOT@10m. SAL/CHL/NUTS
		1414	EN				53° 23.47	129° 10.83							
		1416	BE	NET		189	53° 23.50	129° 10.80		150					BONGO
		1437	BE	TRAWL		190	53 24.25	129 11.67		TOW AT SURFACE.					TRAWL
29	DC 05	1524	BE	CTD		191	53° 25.69	129° 12.11	393			1			T: 7.40 S: 29.02
		1528	BO				53° 25.71	129° 12.09		250					BOT@10m. SAL/CHL/NUTS
		1534	EN				53° 25.74	129° 12.07							CTD ONLY
29	DC 06	1605	BE	CTD		192	53° 29.46	129° 12.63	370			1			T: 7.39 S: 28.84
		1609	BO				53° 29.47	129° 12.64		250					BOT@10m. SAL/CHL/NUTS
		1614	EN				53° 29.47	129° 12.66							
		1617	BE	NET		193	53° 29.48	129° 12.68		150					BONGO
		1637	BE	TRAWL		194	53 29.88	129 12.33		TOW AT 15m.					TRAWL
29	DC 07	1719	BE	CTD		195	53° 32.05	129° 11.93	334			1			T: 8.25 S: 30.59
		1725	BE				53° 32.08	129° 12.04		250					BOT@10m. SAL/CHL/NUTS
		1730	EN				53° 32.06	129° 12.08							CTD ONLY

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____ = _____

Bottle Firing Method:
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Time Code:
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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
29	DC 08	1755	BE	CTD		196	53° 34.90	129° 12.63	280			1	H.M.		T: 7.89 S: 30.15
		1800	BO				53° 34.89	129° 12.69		250					BOT@10m - SAL/CHL/NUTS
		1805	EN				53° 34.87	129° 12.74							
		1808	BE	NET		197	53° 34.84	129° 12.77	150						BONGO
		1829	BE	TRAWL		198	53° 35.44	129° 12.86		TOW	AT 30 M				TRAWL
29	DC 09	1913	BE	CTD		199	53° 37.23	129° 13.20	251			1			T: 7.24 S: 29.35
		1918	BO				53° 37.19	129° 13.27		240					BOT@10m - SAL/CHL/NUTS
		1924	EN				53° 37.18	129° 13.27							CTD ONLY
29	DC 10	1948	BE	CTD		200	53° 39.03	129° 10.25	392			1			T: 7.15 S: 29.15
		1953	BO				53° 39.02	129° 10.26		250					BOT@10m - SAL/CHL/NUTS
		1959	EN				53° 39.00	129° 10.27							
		2001	BE	NET		201	53° 38.98	129° 10.28		150					BONGO
		2020	BE	TRAWL		202	53 39.37	129 9.90		TOW	AT SURFACE				TRAWL
29	DC 11	2130	BE	CTD		203	53° 40.85	129° 07.22	392			1			T: 7.31 S: 28.94
		2135	BO				53° 40.88	129° 07.15							BOT@10m - SAL/CHL/NUTS
		2140	EN				53° 40.92	129° 07.15							CTD ONLY

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DRF = Drifter
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Bottle Firing Method:
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Time Code:
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Month OCTOBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
29	DC 12	2209	BE	CTD		204	53°43.23	129° 03.03	362			1	H.M.		T: 7.39 S: 29.73
		2214	BO				53° 43.21	129° 03.05		250					BOT@10m. SAL/CHL/NUTS
		2219	EN				53° 43.21	129° 03.05							
		2222	BE	NET		205	53° 43.20	129° 03.06		150					BONGO
		2240	BE	TRAWL		206	53 43 66	129 02.42		TOW	AT 15m.				TRAWL
29	DC 13	2323	BE	CTD		207	53°44.69	128° 59.92	314			1			T: 6.97 S: 28.98
		2328	BO				53° 44.68	128° 59.97		250					BOT@10m. SAL/CHL/NUTS
		2333	EN				53° 44.66	129° 00.03							CTD ONLY
		23					53° 44	12							
30	DC 14	0111	BE	CTD	2ND	208	53° 48.64	128° 50.90	340			1			T: 7.39 S: 28.85
		0116	BO				53° 48.66	128° 50.94		268					BOT@10m. SAL/CHL/NUTS
		0122	EN				53° 48.65	128° 50.96							
		0125	BE	NET	3RD	209	53° 48.65	128° 51.01		150					BONGO
30		0027	BE	TRAWL	1ST	210	53 47.17	128 53.95		TOW	AT SURFACE				TRAWL

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Bottle Firing Method:
US = Up / Stop
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Time Code:
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month OCTOBER **Year** 2012 **Ship** W. E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
30	DC 15	1403	BE	CTD		211	53° 57.84	128° 40.47	172			1	H.M.	✓	T: 7.32 S: 30.28
		1407	BO				53° 57.87	128° 40.48		160					BOT@10m. SAL/CHL/NUTS
		1411	EN				53° 57.92	128° 40.47							
		1414	BE	NET		212	53° 57.94	128° 40.44		150					BONGO
		1433	BE	TRAWL		213	53 57.27	128 40.81		TOW AT SURFACE.					TRAWL
30	DC 16	1517	BE	CTD		214	53° 54.72	128° 43.27	232			1			T: 7.54 S: 30.52
		1521	BO				53° 54.75	128° 43.22		220					BOT@10m. SAL/CHL/NUTS
		1527	EN				53° 54.80	128° 43.20							CTD ONLY
30	DC 17	1552	BE	CTD		215	53° 52.21	128° 46.09	296			1			T: 7.18 S: 29.68
		1556	BO				53° 52.24	128° 46.16		250					BOT@10m. SAL/CHL/NUTS
		1602	EN				53° 52.26	128° 46.22							
		1604	BE	NET		216	53° 52.26	128° 46.19		150					BONGO
		1639	BE	TRAWL		217	53 51.34	128 47.59		TOW AT 15m					TRAWL
30	DC 18	1721	BE	CTD		218	53° 49.28	128° 49.42	336			1			T: 6.83 S: 29.03
		1726	BO				53° 49.32	128° 49.41		250					BOT@10m. SAL/CHL/NUTS
		1732	EN				53° 49.35	128° 49.34							CTD ONLY

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Bottle Firing Method:
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Time Code:
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Notes: _____

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WaterProperties.ca
Version: 16 April 2010

DAILY SCIENCE LOG BOOK

MISSION NUMBER 2012-67

DATE: From: OCT 9 to: NOV 4

VESSEL: W. E. RICKER

PROJECT(S): MARC TRUDEL - HIGH SEAS SALMON

BOOK 2 OF 2

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

WaterProperties.ca

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month OCTOBER **Year** 2012 **Ship** W.E. RICHER **Cruise ID** 2012-62

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
30	DC 19	1818	BE	CTD		219	53° 43.36	128° 48.66	311			1	H.M		T: 5.86 S: 26.63
		1822	BO				53° 43.40	128° 48.72		250					BOT@10m - SAL/CHL/NUTS
		1828	EN				53° 43.45	128° 48.80							
		1831	BE	NET		220	53° 43.47	128° 48.86		150					BONGO
		1849	BE	TRAWL		221	53 42.56	128 49.16		TOW AT SURFACE					TRAWL
30	DC 20	1934	BE	CTD		222	53° 39.99	128° 49.88	254	232		1			T: 6.44 S: 26.83
		1938	BO				53° 40.03	128° 49.84		220					BOT@10m - SAL/CHL/NUTS
		1943	EN				53° 40.09	128° 49.85							CTD ONLY
30	DC 21	2006	BE	CTD		223	53° 37.47	128° 50.63	184	165		1			T: 6.67 S: 26.91
		2009	BO				53° 37.46	128° 50.65		155					BOT@10m - SAL/CHL/NUTS
		2013	EN				53° 37.46	128° 50.68							
		2015	BE	NET		224	53° 37.45	128° 50.69		148					BONGO
		2034	BE	TRAWL		225	53° 36.8	128° 50.8		TOW AT 15 m					TRAWL
30	DC 22	2119	BE	CTD		226	53° 34.49	128° 51.20	162			1			T: 6.180 S: 29.76
		2122	BO				53° 34.51	128° 51.20		150					BOT@10m - SAL/CHL/NUTS
		2126	EN				53° 34.51	128° 51.17							CTD ONLY

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DAILY SCIENCE LOG

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Month OCTOBER **Year** 2012 **Ship** W.E. RICHER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
30	DC 23	2203	BE	CTD		227	53°33.52	128°58.62	249			1	H.M.		T: 6.46 S: 27.29
		2207	BO				53°33.53	128°58.60		240					BOTTOM 10m - SAL/CHL/NUTS
		2212	EN				53°33.55	128°58.61							
		2214	BE	NET		228	53°33.53	128°58.63		150					BONGO
		2233	BE	TRAWL		229	53 33.445	128 57.8		TOWED AT 30m.					TRAWL
30	DC 24	2317	BE	CTD		230	53°32.62	128°54.98	215			1			T: 6.39 S: 26.82
		2321	BO				53°32.64	128°54.96		210					BOTTOM 10m - SAL/CHL/NUTS
		2325	EN				53°32.64	128°54.94							CTD ONLY
31	DC 25	1404	BE	CTD		231	53°28.20	129°04.19	200			1		✓	T: 6.81 S: 29.84
		1408	BO				53°28.27	129°04.19		190					BOTTOM 10m - SAL/CHL/NUTS
		1413	EN				53°28.32	129°04.21							
		1416	BE	NET		232	53°28.36	129°04.20		150					BONGO
		1436	BE	TRAWL		233	53 29.21	129 04.56							TRAWL
31	DC 26	1524	BE	CTD		234	53°31.44	129°03.04	100			1			T: 6.58 S: 28.87
		1526	BO				53°31.46	129°03.02		90					BOTTOM 10m - SAL/CHL/NUTS
		1529	EN				53°31.47	129°02.99							CTD ONLY

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
31	DC 27	1615	BE	CTD		235	53° 28.80	128° 58.66	80			1	H.M.		T: 7.15 S: 30.11
		1616	BO				53° 28.81	128° 58.62		70					BOTE 10m - SAL/CHL/NUTS
		1619	EN				53° 28.80	128° 58.60							
		1623	BE	NET		236	53° 28.84	128° 58.52		77					BONGO
		1638	BE	TRAWL		237	53 28.31	128 58.32		Tow	AT 30m				TRAWL
31	DC 28	1721	BE	CTD		238	53° 26.96	128° 56.71	240			1			T: 7.65 S: 30.37
		1725	BO				53° 27.02	128° 56.78		230					BOTE 10m - SAL/CHL/NUTS
		1731	EN				53° 27.07	128° 56.87							CTD ONLY
31	DC 29	1759	BE	CTD		239	53° 23.96	128° 54.23	398			1			T: 7.75 S: 30.48
		1803	BO				53° 23.96	128° 54.30		250					BOTE 10m - SAL/CHL/NUTS
		1809	EN				53° 23.98	128° 54.35							
		1811	BE	NET		240	53° 24.00	128° 54.37		150					BONGO
		1829	BE	TRAWL		241	53 23.29	128 54.35		Tow	AT SURFACE.				TRAWL
31	DC 30	1912	BE	CTD		242	53° 20.19	128° 54.46	473						T: 7.98 S: 30.74
		1917	BO				53° 20.19	128° 54.41		250					BOTE 10m - SAL/CHL/NUTS
		1922	EN				53° 20.20	128° 54.41							CTD ONLY

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Month OCTOBER **Year** 2012 **Ship** W. E RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
31	DC 31	1951	BE	CTD		243	53° 18.52	128° 58.89	408			1	H.M.		T: 7.97 S: 29.58
		1956	BO				53° 18.51	128° 58.91		250					BOT@10m: SAL/CHL/NUTS
		2001	EN				53° 18.51	128° 58.90							
		2004	BE	NET		244	53° 18.50	128° 58.91							
		2022	BE	TRAWL		245	53 18.63	128 59.93		Tow	AT 15m.				BONGO
															TRAWL
31	DC 32	2106	BE	CTD		246	53° 19.32	129° 04.00	420			1			T: 7.77 S: 29.63
		2110	BO				53° 18.35	129° 03.96		250					BOT@10m: SAL/CHL/NUTS
		2115	EN				53° 18.36	129° 03.92							
															CTD ONLY
31	DC 33	2140	BE	CTD		247	53° 17.02	129° 08.08	522			1			T: 7.79 S: 29.88
		2144	BO				53° 17.02	129° 08.13		250					BOT@10m: SAL/CHL/NUTS
		2149	EN				53° 17.01	129° 08.16							
		2151	BE	NET		248	53° 17.00	129° 08.17		150					BONGO
			BE	TRAWL		249									TRAWL
31	DC 34	2252	BE	CTD		250	53° 14.01	129° 07.89	532			1			T: 7.89 S: 29.85
		2256	BO				53° 14.03	129° 07.89		250					BOT@10m: SAL/CHL/NUTS
		2301	EN				53° 14.04	129° 07.91							CTD ONLY

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Month OCTOBER/NOV **Year** 2012 **Ship** W. E. RICKER **Cruise ID** 2012-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
31	DC 35	2328	BE	CTD		251	53°10.72	129°07.83	567			1	H.M.		T: 7.64 S: 29.76
		2332	BO				53°10.70	129°07.81		250					BOT@10m SAL/CHL/NUTS
		2337	EN				53°10.68	129°07.82							
		2340	BE	NET		252	53°10.66	129°07.83							BONGO
			BE	TRAWL		253									TRAWL
1	DC 36	0043	BE	CTD		254	53°07.29	129°07.43	559			1			T: 7.89 S: 29.86
		0048	BO				53°07.28	129°07.42		250					BOT@10m SAL/CHL/NUTS
		0053	EN				53°07.27	129°07.43							CTD ONLY
1	DC 37	0214	BE	CTD		255	53°08.14	129°22.98	535			1			T: 7.94 S: 30.08
		0218	BO				53°08.15	129°23.01							BOT@10m SAL/CHL/NUTS
		0224	EN				53°08.15	129°23.04							CTD ONLY
1	DC 38	0318	BE	CTD		256	53°15.21	129°25.81	510			1			T: 7.85 S: 29.97
		0322	BO				53°15.23	129°25.77		250					BOT@10m SAL/CHL/NUTS
		0328	EN				53°15.21	129°25.72							CTD ONLY

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Month NOVEMBER **Year** 2012 **Ship** W.E. RICKER **Cruise ID** 2010-67

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
1	DC 39	0409	BE	CTD		257	53° 15.08	129° 19.14	545			1	H.M.		T: 8.10 S: 30.75
		0413	BO				53° 15.10	129° 19.12							BOT@10m - SAL/CHL/NUTS
		0419	EN				53° 15.13	129° 19.14							CTD ONLY
2	JS 03	1417	BE	CTD		258	50° 29.92	126° 32.91	436			0		✓	T: 8.61 S: 31.15
		1422	BO				50° 29.92	126° 32.81		250					NO BOT
		1426	EN				50° 29.92	126° 32.72							
		1429	BE	NET		259	50° 29.91	126° 32.67		150					BONGO
		1509	BE	TRAWL		260	50 30.16	126 31.9	TOW AT SURFACE, TOW CONTINUED FOR DAYLIGHT						TRAWL
2	JS 04	1612	BE	CTD		261	50° 30.10	126° 25.72	357			0			T: 8.67 S: 31.42
		1617	BO				50° 30.12	126° 25.83		250					—
		1622	EN				50° 30.11	126° 25.94							
		1625	BE	NET		262	50° 30.13	126° 26.03		150					BONGO
		1643	BE	TRAWL		263	50 29.94	126 25.5	TOW AT 15 m						TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
2	JS 05	1741	BE	CTD		264	50°29.49	126°21.11	379			0	H.M.		T: 8.66 S: 30.03
		1746	BO				50°29.55	126°21.20		250					—
		1751	EN				50°29.59	126°21.26							
		1754	BE	NET		265	50°29.62	126°21.35		150					BONGO
		1814	BE	TRAWL		266	50 29.83	126 20.89	TOW AT		SURFACE.				TRAWL
2	JS 06	1915	BE	CTD		267	50°29.60	126°14.42	305			0			T: 8.71 S: 30.91
		1920	BO				50°29.59	126°14.44		250					—
		1924	EN				50°29.59	126°14.48							
		1927	BE	NET		268	50°29.59	126°14.50		150					BONGO
		1945	BE	TRAWL		269	50 29.41	126 13.9	TOW	AT	30 m.				TRAWL
2	JS 07	2038	BE	CTD		270	50°28.34	126°09.11	329			0			T: 8.71 S: 30.92
		2043	BO				50°28.33	126°09.13		250					—
		2047	EN				50°28.33	126°09.12							
		2049	BE	NET		271	50°28.34	126°09.13		150					BONGO
		2108	BE	TRAWL		272	50°28.12	126 08.38		TOW	AT	SURFACE			TRAWL

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
2	JS 08	2201	BE	CTD		273	50° 26.86	126° 01.92	124			0	H.M.		T: 8.70 S: 30.92
		2204	BO				50° 26.87	126° 01.91		116					
		2206	EN				50° 26.87	126° 01.91							
		2210	BE	NET		274	50° 26.88	126° 01.93		114					BONGO
		2228	BE	TRAWL		275	50 26 76	126 01 31			TOW AT 15m				TRAWL
3	GS 01	1401	BE	CTD		276	50° 27.33	125° 04.32	652			0		✓	T: 8.62 S: 24.41
		1405	BO				50° 27.26	125° 04.35		250					
		1410	EN				50° 27.17	125° 04.38							
		1413	BE	NET		277	50° 27.12	125° 04.39		150					BONGO
		1454	BE	TRAWL		278	50 26 58	125 04.83			TOW AT SURFACE				TRAWL
3	GS 02	1606	BE	CTD		279	50° 20.76	125° 06.74	576			0			T: 9.66 S: 26.56
		1611	BO				50° 20.80	125° 06.76		250					
		1615	EN				50° 20.82	125° 06.75							
		1618	BE	NET		280	50° 20.85	125° 06.76		150					BONGO
		1646	BE	TRAWL		281	50 19.2	125 05.60			TOW AT 15M				TRAWL

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3	GS 03	1729	BE	CTD		282	50° 17.67	125° 02.89	347			0	H.M.		T: 9.55 S: 26.96
		1734	BO				50° 17.64	125° 02.88		250					
		1738	EN				50° 17.66	125° 02.88							
		1741	BE	NET		283	50° 17.66	125° 02.88		150					BONGO
		1758	BE	TRAWL		284	50 16.98	125 02.24		TOW	AT SURFACE				TRAWL
3	GS 04	1901	BE	CTD		285	50° 17.77	124° 56.99	508			0			T: 9.73 S: 26.86
		1906	BO				50° 17.83	124° 56.97		250					
		1910	EN				50° 17.88	124° 56.96							
		1913	BE	NET		286	50° 17.89	124° 56.95		150					BONGO
		1931	BE	TRAWL		287	50 17.67	124 57.21		TOW	AT 15m				TRAWL
3	GS 05	2103	BE	CTD		288	50° 09.47	125° 02.69	455			0			T: 9.94 S: 27.56
		2108	BO				50° 09.44	125° 02.70		250					
		2112	EN				50° 09.43	125° 02.74							
		2115	BE	NET		289	50° 09.44	125° 02.74		150					BONGO
		2132	BE	TRAWL		290	50 08.99	125 03.37		TOW	AT SURFACE				TRAWL

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3	GS 06	2228	BE	CTD		291	50°05.61	125°08.20	215			0	H.M.		T: 10.06 S: 28.12
		2232	BO				50°05.60	125°08.15		205					✓
		2235	EN				50°05.59	125°08.13							
		2238	BE	NET		292	50°05.61	125°08.15		150					BONGO
		2257	BE	TRAWL		293	50 05.13	125 07.99		TOW	AT 15m.				TRAWL

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