

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2010-18

DATE:

From: OCT 1 / 10 to: NOV 19 / 10

VESSEL:

W. E. RICKER

PROJECT(S):

HIGH SEAS SALMON (TRAUDEL)

Book 3 of 3

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

Page 51 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER				Cruise ID 2010-18				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
5	IBC 39	1634	BE	CTD		408	53° 09.39	129° 23.34	548			1	H.M.		T: 9.18 S: 28.59
		1639	BO				53° 09.40	129° 23.32		250					BOT@10m - SAL/CAL/NUTS
		1644	EN				53° 09.38	129° 23.32							
		1646	BE	NET		409	53° 09.38	129° 23.32		150					BONGO
		1705	BE	TRAWL		410	53° 08.94	129° 22.91	489						TRAWL
5	IBC 40	1820	BE	CTD		411	53° 02.79	129° 17.01	428			1			T: 9.94 S: 29.35
		1825	BO				53° 02.87	129° 16.99		250					BOT@10m - SAL/CAL/NUTS
		1831	EN				53° 02.93	129° 17.02							
		1833	BE	NET		412	53° 02.95	129° 17.04		150					BONGO
		1852	BE	TRAWL		413	53° 02.30	129° 16.27	364						TRAWL
5	IBC 41	2010	BE	CTD		414	52° 55.03	129° 18.94	232						T: 10.22 S: 30.56
		2014	BO				52° 55.03	129° 18.91		220					BOT@10m - SAL/CAL/NUTS
		2019	EN				52° 55.03	129° 18.88							
		2021	BE	NET		415	52° 55.03	129° 18.84		150					BONGO
		2041	BE	TRAWL		416	52° 55.42	129° 19.88	222						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

Notes:

Time Code:

BE = Beginning Time of Cast

BO = Bottom Time of Cast

EN = End Time of Cast

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

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

Page 52 of

Month				Year				Ship				Cruise ID				Page		of	
NOVEMBER				2010				W.E. RICHER				2010-13				52		of	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments				
							Latitude	Longitude											
5	1BC 42	2150	BE	CTD		417	53°00.20	129° 28.98	117			1	W.M.		T: 10.13 S: 30.38				
		2152	BO				53°00.18	129° 28.94		105					BOT@10m - SAL/CYL/NUTS				
		2155	EN				53°00.14	129° 28.88											
		2158	BE	NET		418	53°00.10	129° 28.85		100					BONGO				
		2215	BE	TRAWL		419	53°00.64	129° 29.45	118						TRAWL				
6	DE 06	1448	BE	CTD		420	54° 14.94	132° 55.64	213			1		✓	T: 10.31 S: 32.00				
		1452	BO				54° 14.98	132° 55.53		200					BOT@10m - SAL/CYL/NUTS				
		1457	EN				54° 15.03	132° 55.40											
		1500	BE	NET		421	54° 15.05	132° 55.36		150					BONGO				
		1527	BE	TRAWL		422	54° 14.404	132° 53.578	233						TRAWL				
6	DE 05	1633	BE	CTD		423	54° 10.58	132° 46.73	58			1			T: 10.41 S: 31.99				
		1634	BO				54° 10.56	132° 46.68		50					BOT@10m - SAL/CYL/NUTS				
		1636	EN				54° 10.55	132° 46.63											
		1639	BE	NET		424	54° 10.54	132° 46.60		45					BONGO				
		1653	BE	TRAWL		425	54° 10.483	132° 45.464	55						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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 53 of

Month <u>NOVEMBER</u>		Year <u>2010</u>		Ship <u>W.E. RICKER</u>		Cruise ID <u>2010-18</u>									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
6	DE 04	1817	BE	CTD		426	54° 09.73	132° 31.82	66			1	H.M.		T: 10.06 S: 31.95
		1819	BO				54° 09.71	132° 31.80		55					BOT@10m SAL/CHL/NUIS
		1821	EN				54° 09.71	132° 31.75							
		1823	BE	NET		427	54° 09.69	132° 31.69		55					BONGO
		1839	BE	TRAWL		428	54° 09.393	132° 30.271	57						TRAWL
6	DE 03	2018	BE	CTD		429	54° 10.10	132° 14.04	81			1			T: 9.95 S: 31.70
		2019	BO				54° 10.08	132° 13.99		70					BOT@10m SAL/CHL/NUIS
		2021	EN				54° 10.10	132° 13.93							
		2024	BE	NET		430	54° 10.11	132° 13.85		70					BONGO
		2041	BE	TRAWL		431	54° 10.38	132° 12.44	74						TRAWL
6	DE 02	2216	BE	CTD		432	54° 09.88	131° 56.05	71			1			T: 9.61 S: 31.66
		2217	BO				54° 09.87	131° 56.04		60					BOT@10m SAL/CHL/NUIS
		2219	EN				54° 09.87	131° 56.04							
		2222	BE	NET		433	54° 09.85	131° 56.05		60					BONGO
		2237	BE	TRAWL		434	54° 10.16	131° 55.03	75						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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Page 54 of

Month				Year				Ship				Cruise ID				Page		of	
NOVEMBER				2010				W. E. RICKER				2010-18				54		of	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments				
							Latitude	Longitude											
7	DE 01	0059	BE	CTD		435	54° 14.08	131° 41.37	102			1	H.M.		T: 9.61 S: 31.77				
		0101	BO				54° 14.06	131° 41.37		90					BOTOM-SAL/CHL/NUTS				
		0104	EN				54° 14.03	131° 41.40											
		0107	BE	NET		436	54° 13.98	131° 41.43		90									
		2346	BE	TRAWL		437	54° 13.17	131° 48.82	124						BONGO TRAWL				
				DATA	LIGHT		SAVINGS												
7	IBC 43	1501	BE	CTD		438	55° 00.18	130° 01.85	185			1		✓	T: 8.57 S: 27.09				
		1505	BO				55° 00.20	130° 01.83		175					BOTOM-SAL/CHL/NUTS				
		1509	EN				55° 00.20	130° 01.87											
		1512	BE	NET		439	55° 00.20	130° 01.89		150					BONGO				
		1532	BE	TRAWL		440	54° 59.649	130° 02.719	196						TRAWL				
7	IBC 44	1650	BE	CTD		441	54° 52.02	130° 12.34	420			1			T: 8.28 S: 25.98				
		1654	BO				54° 52.06	130° 12.31		250					BOTOM-SAL/CHL/NUTS				
		1700	EN				54° 52.06	130° 12.32											
		1703	BE	NET		442	54° 52.05	130° 12.34		150					BONGO				
		1729	BE	TRAWL		443	54° 50.947	130° 14.183	398						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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

This page is for any notes or observations

DE01: Trawl first then CTD/bongo.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 55 of

Month				Year			Ship				Cruise ID				Page		of	
NOVEMBER				2010			W.E. RICKER				2010-18				55		of	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments			
							Latitude	Longitude										
7	IBC 45	1815	BE	CTD		444	54° 47.79	130° 17.73	464			1	H.M.		T: 8.57 s: 26.47			
		1820	BO				54° 47.76	130° 17.81		250					Boreion. SAL/CHL/NTS			
		1826	EN				54° 47.69	130° 17.86										
		1830	BE	NET		445	54° 47.66	130° 18.13		150					BONGO			
		1849	BE	TRAWL		446	54° 47.137	130° 18.998	463						TRAWL			
7	IBC 46	1953	BE	CTD		447	54° 43.82	130° 25.42	487			1			T: S:			
		1958	BO				54° 43.81	130° 25.42		250					Boreion. SAL/CHL/NTS			
		2005	EN				54° 43.79	130° 25.44										
		2008	BE	NET		448	54° 43.79	130° 25.45		150					BONGO			
		2028	BE	TRAWL		449	54° 42.92	130° 25.87	480						TRAWL			
7	IBC 47	2132	BE	CTD		450	54° 36.80	130° 30.32	466			1			T: 9.41 s: 28.69			
		2135	BO				54° 36.81	130° 30.30	154	145					Boreion. SAL/CHL/NTS			
		2139	EN				54° 36.81	130° 30.27										
		2141	BE	NET		451	54° 36.80	130° 30.24		145					BONGO			
		2159	BE	TRAWL		452	54° 36.08	130° 30.53	386						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

Notes: _____

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Page 56 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER				Cruise ID 2010-18				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
7	IBC 48	2315	BE	CTD		453	54°29.21	130°32.45	155			1	Hm		T: 9.33 S: 28.28
		2318	BO				54°29.24	130°32.37		145					BOTOM. SAL/CHL/NUTS
		2321	EN				54°29.24	130°32.33							
		2325	BE	NET		454	54°29.26	130°32.28		135					BONGO
		2347	BE	TRAWL		455	54°28.52	130°32.73	145						TRAWL
		CREW	CHANGE												
10	ISEA 01	1704	BG	CTD		456	55°59.03	131°14.14	351			1		✓	T: 7.01 S: 21.20
		1710	BO				55°59.05	131°14.17		250					BOTOM. SAL/CHL/NUTS
		1715	EN				55°59.08	131°14.16							
		1718	BG	NET		457	55°59.10	131°14.15		150					BONGO
		1744	BG	TRAWL		458	55°58.86	131°14.06							TRAWL
10	ISEA 02	1906	BE	CTD		459	55°51.64	131°04.44	551			1			T: 8.89 S: 25.63
		1912	BO				55°51.59	131°04.37		250					BOTOM. SAL/CHL/NUTS
		1919	EN				55°51.50	131°04.30							
		1922	BE	NET		460	55°51.48	131°04.32							BONGO
		1944	BE	TRAWL		461	55°50.61	131°04.1							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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 57 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER			Cruise ID 2010-18					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
10	ISCA 03	2106	BE	CTD		462	55° 42.30	130° 56.34	513			1	H.M.		T: 8.03 S: 24.07
		2111	BO				55° 42.22	130° 56.31		250					BOT@10m - SAL/CHL/NOTS
		2118	EN				55° 42.13	130° 56.27							
		2120	BE	NET		463	55° 42.06	130° 56.23							
		2142	BE	TRAWL		464	55 40.73	130 55.68							BONGO
															TRAWL
10	ISCA 04	2248	BE	CTD		465	55° 34.10	130° 54.48	401			1			T: 8.30 S: 24.71
		2253	BO				55° 34.11	130° 54.54							BOT@10m - SAL/CHL/NOTS
		2259	EN				55° 34.13	130° 54.60							
		2301	BE	NET		466	55° 34.14	130° 54.64							BONGO
		2321	BE	TRAWL		467	55 33.10	130 55.47							TRAWL
11	ISCA 05	0142	BE	CTD		468	55° 23.11	130° 55.98	399			1			T: 7.36 S: 25.00
	2 nd	0148	BO				55° 22.98	130° 55.95		250					BOT@10m - SAL/CHL/NOTS
		0154	EN				55° 22.95	130° 55.97							
	3 rd	0205	BE	NET		469	55° 22.95	130° 55.53							BONGO
	1 st	0032	BE	TRAWL		470	55 25.81	130 57.13							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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Page 58 of

Month <u>NOVEMBER</u>		Year <u>2010</u>		Ship <u>W.E. RICHER</u>		Cruise ID <u>2010-13</u>									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	ISCA 06	1509	BE	CTD		471	55° 18.32	131° 56.81	393			1	H.M.	✓	T: 8.94 S: 28.96
		1514	BO				55° 18.36	131° 56.64		250					BOTOM-SAL/CAL/NOTES
		1521	EN				55° 18.40	131° 56.52							
		1525	BE	NET		472	55° 18.36	131° 56.22		150					BONGO
		1547	BE	TRAWL		473	55 18 89	131 56.67							TRAWL
11	ISCA 07	1747	BE	CTD		474	55° 32.48	132° 08.77	425			1			T: 7.84 S: 25.91
		1752	BO				55° 32.56	132° 08.72		250					BOTOM-SAL/CAL/NOTES
		1758	EN				55° 32.55	132° 08.67							
		1803	BE	NET		475	55° 32.52	132° 08.50		150					BONGO
		1812	BE	TRAWL		476	55 33 15	132 10.31							TRAWL
11	ISCA 08	1953	BE	CTD		477	55° 40.14	132° 15.77	383			1			T: 8.19 S: 27.13
		1958	BO				55° 40.17	132° 15.72		250					BOTOM-SAL/CAL/NOTES
		2003	EN				55° 40.19	132° 15.67							
		2006	BE	NET		478	55° 40.19	132° 15.67		150					BONGO
		2027	BE	TRAWL		479	55 41 13	132 16.63							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
RE = Recover Mooring Time

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

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 16 April 2010

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 59 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER				Cruise ID 2010-18				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	ISCA 09	2153	BE	CTD		480	55° 43.01	132° 21.44	624			1	H.M.		T: 8.11 S: 27.16
		2157	BO				55° 43.04	132° 21.37		250					BOTOM - SAL/CHL/NUIS
		2203	EN				55° 43.07	132° 21.30							
		2205	BE	NET		481	55° 43.09	132° 21.28		150					BONGO
		2225	BE	TRAWL		482	55° 43.72	132° 21.89							TRAWL
11	ISCA 10	2340	BE	CTD		483	55° 55.50	132° 30.23	430			1			T: 8.55 S: 28.23
		2345	BO				55° 55.58	132° 30.16		250					BOTOM - SAL/CHL/NUIS
		2351	EN				55° 55.62	132° 30.06							
		2354	BE	NET		484	55° 55.66	132° 30.03							BONGO
12		0014	BE	TRAWL		485	55° 56.44	132° 31.02							TRAWL
12	ISCA 11	1649	BE	CTD	2 ND	486	56° 15.26	132° 41.05	364			1		✓	T: 8.90 S: 29.33
		1654	BO				56° 15.35	132° 40.92							BOTOM - SAL/CHL/NUIS
		1700	EN				56° 15.42	132° 40.82							
		1705	BE	NET	3 RD	487	56° 15.41	132° 40.60		150					BONGO
		1804	BE	TRAWL	1 ST	488	56° 12.62	132° 45.00							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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Page 60 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER				Cruise ID 2010-18				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
12	ISCA 12	1745	BE	CTD		489	56° 18.63	132° 36.05	301			1	H.M		T: 8.71 S: 28.23
		1750	BO				56° 18.69	132° 35.89		250					BOTBIO - SAL/CHL/NUTS
		1756	EN				56° 18.78	132° 35.79							
		1759	BE	NET		490	56° 18.84	132° 35.73		150					BONGO
		1812	BE	TRAWL		491	56 20 14	132 35 24							TRAWL
12	ISCA 13	1935	BE	CTD		492	56° 28.13	132° 39.25	86			1			T: 8.40 S: 28.14
		1936	BO				56° 28.13	132° 39.27		75					BOTBIO - SAL/CHL/NUTS
		1939	EN				56° 28.13	132° 39.31							
		1941	BE	NET		493	56° 28.13	132° 39.34		81					BONGO
		1956	BE	TRAWL		494	56.28.7	132 40.4							TRAWL
12	ISCA 14	2111	BE	CTD		495	56° 29.53	132° 54.16	128			1			T: 7.94 S: 27.24
		2114	BO				56° 29.54	132° 54.20		120					BOTBIO - SAL/CHL/NUTS
		2117	EN				56° 29.56	132° 54.18							
		2120	BE	NET		496	56° 29.56	132° 54.04		118					BONGO
		2138	BE	TRAWL		497	56 29.3	132 55.7							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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 61 of

Month <u>NOVEMBER</u>			Year <u>2010</u>			Ship <u>W.E. RICKER</u>			Cruise ID <u>2010-18</u>						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
12	ISEA 15	2249	BE	CTD		498	56°25.70	133°05.06	80			1	H.M.		T: 8.24 S: 28.98
		2251	BO				56°25.68	133°05.06		70					BOTEDW SAL/CAL/NUTS
		2253	EN				56°25.68	133°05.01							
		2255	BE	NET		499	56°25.69	133°04.99		68					BONGO
		2311	BE	TRAWL		500	56°25.0	133°06.25							TRAWL
13	ISEA 16	0137	BE	CTD	2 nd	501	56°22.17	133°22.59	332			1			T: 8.23 S: 30.16
		0143	BO				56°22.14	133°22.63		256					BOTEDW SAL/CAL/NUTS
		0149	EN				56°22.12	133°22.53							
		0152	BE	NET	3 rd	502	56°22.09	133°22.44		150					BONGO
		0032	BE	TRAWL	1 st	503	56°22.3	133°18.1							TRAWL
13	ISEA 17	1516	BE	CTD		504	56°00.39	133°49.01	330			1		✓	T: 8.26 S: 30.99
		1521	BO				56°00.33	133°48.98		250					BOTEDW SAL/CAL/NUTS
		1527	EN				56°00.29	133°48.92							
		1529	BE	NET		505	56°00.27	133°48.87		150					BONGO
		1532	BE	TRAWL		506	56°01.402	133°48.501							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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 62 of

Month <u>NOVEMBER</u>				Year <u>2010</u>			Ship <u>W.E. RICKER</u>				Cruise ID <u>2010-18</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
13	ISEA 18	1656	BE	CTD		507	56° 06.29	133° 46.25	244			1	H.M.		T: 8.08 S: 30.53
		1701	BO				56° 06.21	133° 46.12		225					BOT 10m SAL/CHL/NUIS
		1707	EN				56° 06.21	133° 46.02							
		1710	BE	NET		508	56° 06.17	133° 45.94		150					BONGO
		1732	BE	TRAWL		509	56° 06.84	133° 45.57							TRAWL
13	ISEA 19	1846	BE	CTD		510	56° 13.88	133° 46.76	298			1			T: 8.09 S: 30.29
		1852	BO				56° 13.77	133° 46.55		250					BOT 10m SAL/CHL/NUIS
		1858	EN				56° 13.68	133° 46.37							
		1901	BE	NET		511	56° 13.61	133° 46.30		150					BONGO
		1925	BE	TRAWL		512	56° 14.13	133° 45.62							TRAWL
13	ISEA 20	2027	BE	CTD		513	56° 18.47	133° 48.35	300			1			T: 8.20 S: 30.21
		2032	BO				56° 18.38	133° 48.41		250					BOT 10m SAL/CHL/NUIS
		2037	EN				56° 18.26	133° 48.51							
		2040	BE	NET		514	56° 18.21	133° 48.52		150					BONGO
		2100	BE	TRAWL		515	56° 18.5	133° 47.8							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

Notes:

Time Code:

BE = Beginning Time of Cast

BO = Bottom Time of Cast

EN = End Time of Cast

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

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

Page 63 of

Month <u>NOVEMBER</u>		Year <u>2010</u>		Ship <u>W.E. RICKER</u>		Cruise ID <u>2010-18</u>									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
13	ISEA 21	22 23	BE	CTD		516	56° 25. 76	133° 45. 22	356			1	H.M.		T: 8.12 S: 29.74
		22 28	BO				56° 25. 71	133° 45. 16		250					BOTEDON-SAL/CHL/NUIS
		22 33	EN				56° 25. 70	133° 45. 08							
		22 35	BE	NET		517	56° 25. 70	133° 45. 05		150					BONGO
		22 57	BE	TRAWL		518	56 25 23	133 43. 51							TRAWL
14	ISEA 22	00 39	BE	CTD	2 ND	519	56° 22. 25	133° 31. 73	372			1			T: 8.40 S: 30.06
		00 44	BO				56° 22. 31	133° 31. 71		250					BOTEDON-SAL/CHL/NUIS
		00 50	EN				56° 22. 37	133° 31. 66							
		00 52	BE	NET	3 RD	520	56° 22. 40	133° 31. 66		150					BONGO
		03 56	BE	TRAWL	1 ST	521	56 23. 65	133 35. 9							TRAWL
14	ISEA 23	15 05	BE	CTD		522	55° 10. 59	131° 55. 48	322			1		✓	T: 8.89 S: 28.47
		15 10	BO				55° 10. 58	131° 55. 44		250					BOTEDON-SAL/CHL/NUIS
		15 16	EN				55° 10. 52	131° 55. 38							
		15 19	BE	NET		523	55° 10. 45	131° 55. 38		150					BONGO
		15 42	BE	TRAWL		524	55 9. 7	131 55. 7							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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 64 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER				Cruise ID 2010-18				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
14	ISEA 24	1706	BE	CTD		525	55° 00.85	131° 53.45	413			1	HM.		T: 9.34 S: 30.32
		1711	BO				55° 00.80	131° 53.45		250					BOTOM. SAL/CHL/NUIS
		1718	EN				55° 00.77	131° 53.44							
		1720	BE	NET		526	55° 00.73	131° 53.40		150					BONGO
		1743	BE	TRAWL		527	54 59.89	131 53.7.							TRAWL
14	ISEA 25	1907	BE	CTD		528	54° 51.07	131° 54.93	400			1			T: 9.17 S: 29.58
		1913	BO				54° 50.88	131° 54.83		250					BOTOM. SAL/CHL/NUIS
		1919	EN				54° 50.75	131° 54.73							
		1922	BE	NET		529	54° 50.65	131° 54.65		150					BONGO
		1945	BE	TRAWL		530	54 49.5	131 53.64							TRAWL
14	ISEA 26	2118	BE	CTD		531	54° 43.34	131° 38.79	265			1			T: 9.12 S: 29.63
		2123	BO				54° 43.26	131° 38.95		250					BOTOM. SAL/CHL/NUIS
		2129	EN				54° 43.16	131° 39.15							
		2131	BE	NET		532	54° 43.14	131° 39.22		150					BONGO
		2152	BE	TRAWL		533	54 42.65	131 38.64							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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 65 of

Month		NOVEMBER		Year			2010			Ship		WE. RICKER		Cruise ID				2010-18		Page		65		of	
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments										
							Latitude	Longitude																	
14	ISEA 27	2336	BE	CTD		534	54° 42.47	131° 21.49	148			1	H.M.		T: 9.15 S: 29.63										
		2339	BO				54° 42.42	131° 21.55		135					BOTOM. SAL/CHL/NOTS										
		2344	EN				54° 42.34	131° 21.65																	
		2346	BE	NET		535	54° 42.31	131° 21.76		125					BONGO										
15		00:08	BE	TRAWL		536	54 42.4	131 20.94							TRAWL										
15	IBC 49	1506	BE	CTD		537	54° 32.82	130° 40.24	95			1		✓	T: 9.57 S: 31.14										
		1508	BO				54° 32.82	130° 40.24		85					BOTOM. SAL/CHL/NOTS										
		1511	EN				54° 32.83	130° 40.25																	
		1514	BE	NET		538	54° 32.87	130° 40.30		85					BONGO										
		1534	BE	TRAWL		539	54 32.47	130 39.6							TRAWL										
15	IBC 50	1649	BE	CTD		540	54° 27.36	130° 31.00	83			1			T: 8.94 S: 27.56										
		1651	BO				54° 27.41	130° 30.98		70					BOTOM. SAL/CHL/NOTS										
		1653	EN				54° 27.42	130° 30.99																	
		1655	BE	NET		541	54° 27.45	130° 31.00		73					BONGO										
		1714	BE	TRAWL		542	54 27 35	130 31.15							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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Page 66 of

Month <u>NOVEMBER</u>				Year <u>2010</u>			Ship <u>W. E. RICKER</u>				Cruise ID <u>2010-18</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
15	IBC 51	1820	BE	CTD		543	54° 22.46	130° 34.37	106			1	H.M.		T: 9.39 S: 29.58
		1822	BO				54° 22.48	130° 34.37		75					BOTOM-SAL/CHL/NTS
		1824	EN				54° 22.51	130° 34.42							
		1828	BE	NET		544	54° 22.56	130° 34.42		68					BONGO
		1845	BE	TRAWL		545	54 22 12	130 33.912							TRAWL
15	IBC 52	2014	BE	CTD		546	54° 17.01	130° 33.80	100			1			T: 9.05 S: 28.90
		2016	BO				54° 17.07	130° 33.85		90					BOTOM-SAL/CHL/NTS
		2018	EN				54° 17.12	130° 33.95							
		2021	BE	NET		547	54° 17.21	130° 33.96	111	100					BONGO
		2038	BE	TRAWL		548	54 17.035	130 33.52							TRAWL
15	IBC 53	2210	BE	CTD		549	54° 13.83	130° 45.55	160			1			T: 9.86 S: 31.34
		2213	BO				54° 13.87	130° 45.55		150					BOTOM-SAL/CHL/NTS
		2217	EN				54° 13.91	130° 45.53							
		2219	BE	NET		550	54° 13.94	130° 45.52		150					BONGO
		2240	BE	TRAWL		551	54 13.43	130 44.74							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 DE = Deployment Time
BO = Bottom Time of Cast MR = Messenger Release Time
EN = End Time of Cast RE = Recover Mooring Time

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

Page 67 of

Month <u>NOVEMBER</u>				Year <u>2010</u>			Ship <u>W. E. RICHER</u>				Cruise ID <u>2010-13</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
15	IBC 54	2356	BE	CTD		552	54° 10. 49	130° 34. 09	105			1	H.M.		T: 9.75 S: 31.13
		2358	BO				54° 10. 50	130° 34. 10		95					BOT@10m - SAL/CHL/NOTS
16		0000	EN				54° 10. 52	130° 34. 12							
		0003	BE	NET		553	54° 10. 54	130° 34. 14		95					BONGO
		0021	BE	TRAWL		554	54° 10. 46	130° 32. 09							TRAWL
16	IBC 55	1504	BE	CTD		555	53° 43. 87	130° 36. 73	83			1		✓	T: 9.26 S: 29.75
		1506	BO				53° 43. 88	130° 36. 83		75					BOT@10m - SAL/CHL/NOTS
		1508	EN				53° 43. 91	130° 36. 95							
		1512	BE	NET		556	53° 44. 01	130° 37. 07		75					BONGO
		1530	BE	TRAWL		557	53° 43. 91								TRAWL
16	IBC 56	1718	BE	CTD		558	53° 36. 14	130° 20. 60	313			1			T: 9.02 S: 28.75
		1724	BO				53° 36. 11	130° 20. 62		250					BOT@10m - SAL/CHL/NOTS
		1729	EN				53° 36. 14	130° 20. 63							
		1732	BE	NET		559	53° 36. 14	130° 20. 62		150					BONGO
		1754	BE	TRAWL		560	53° 35. 82	130° 19. 20							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

Notes: _____

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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

Page 68 of

Month NOVEMBER				Year 2010			Ship W.E. RICKER			Cruise ID 2010-18					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	IBC 57	1948	BE	CTD		561	53° 29.17	130° 01.52	212			1	H.M.		T: 8.88 S: 29.19
		1952	BO				53° 29.12	130° 01.42		200					BOTOM. SAL/CHL/NOTS
		1957	EN				53° 29.09	130° 01.33							
		1959	BE	NET		562	53° 29.05	130° 01.22	150						BONGO
		2019	BE	TRAWL		563	53 28.26	129 59.74							TRAWL
16	IBC 58	2202	BE	CTD		564	53° 19.04	129° 45.21	175			1			T: 9.14 S: 29.58
		2205	BO				53° 18.99	129° 45.08		165					BOTOM. SAL/CHL/NOTS
		2210	EN				53° 18.95	129° 45.04							
		2212	BE	NET		565	53° 18.91	129° 45.02		150					BONGO
		2231	BE	TRAWL		566	53 18.1	129 43.85							TRAWL
16	IBC 59	2356	BE	CTD		567	53° 10.20	129° 35.81	186			1			T: 9.32 S: 29.35
		2359	BO				53° 10.20	129° 35.82	177	165					BOTOM. SAL/CHL/NOTS
17		0004	EN				53° 10.21	129° 35.81							
		0006	BE	NET		568	53° 10.22	129° 35.80		150					BONGO
		0025	BE	TRAWL		569	53 10.81	129 34.77							TRAWL
							END OF TRIP								

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

Notes:

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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