

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2011-02

DATE:

From: 01 FEB 2011

to: 28 FEB 2011

VESSEL:

W.E. RICKER

PROJECT(S):

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

01 FEB 11: Regular 9/11 CTD unit has not returned from annual maintenance at Seabird yet. Therefore, using SBE 19 until it comes back (expected for second leg of survey Feb 17-28). All depths recorded for SBE 19 casts will be based on winch counter readings.

07 FEB 11 - Dummy plug left off during day's casts (QCST07-13)

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Month FEB

Year 2011

Ship W.E. RICKER

Cruise ID 2011-02

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							
02	VI 01	1538	BE	CTD		001	48° 42.32	125° 11.38	62			1	MT	n/a	BOT @ 10m (chl, nitr & sal)
		1540	BO				48° 42.32	125° 11.37		50					
		1542	EN				48° 42.31	125° 11.39							
		1553	BE	NET		002	48° 42.23	125° 11.34	60	50					
		1616	BE	SET		003	48° 42.54	125° 12.12	63						BONGO-VNH TRAWL
02	VI 01	2037	BE	CTD		004	48° 54.36	125° 12.59	93			1			BOT @ 10m (chl, nitr & sal)
		2039	BO				48° 54.35	125° 12.58		80					
		2041	EN				48° 54.35	125° 12.60							
		2044	BE	NET		005	48° 54.31	125° 12.66	94	84					
		2104	BE	SET		006	48° 53.54	125° 13.32	92						BONGO-VNH TRAWL
02	VI 02	2223	BE	CTD		007	48° 47.87	125° 21.63	86			1	↓		BOT @ 10m (chl, nitr & sal)
		2225	BO				48° 47.88	125° 21.62		75					
		2227	EN				48° 47.89	125° 21.60							
		2230	BE	NET		008	48° 47.88	125° 21.58	85	75					
		2248	BE	SET		009	48° 47.46	125° 22.59	87						BONGO-VNH TRAWL

Cast Type:
 BOT = Bottle cast, no CTD
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 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
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Time Code:
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MR = Messenger Release Time
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Transmissometer to be cleaned before each cast, do not use Ammonia products

Notes:

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V101: Stopped mid-cast when it was realized Niskin bottle was not put on wire prior to cast. Cast continued and Niskin was installed & deployed at the end of the cast. During Niskin cast, CTD was sent to 125m instead of 15m. CTD was stopped at 15m on upcast and tripped. Everything appears okay, but...?

IV101: Held CTD at surface for 1 min. prior to starting cast. Will do this for all casts from this point forward.

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Month FEB				Year 2011			Ship WE RICKER				Cruise ID 2011-02				
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							
03	VI03	0036	BE	CTD		010	48°40.60	125°35.58	166			1	MT	NA	BOT@10m
		0039	BO				48°40.66	125°35.53		155					(CHL, NUTS & SAL)
		0042	EN				48°40.66	125°35.53							
		0044	BE	NET		011	48°40.69	125°35.54	156	146					BONGO-VNH
		0105	BE	SET		012	48°40.80	125°36.80	113						TRAWL
END OF DAY															
03	EP01	1506	BE	CTD		013	49°21.07	126°31.89	32			1			BOT@10m
		1506	BO				49°21.09	126°31.90		25					(CHL, NUTS & SAL)
		1507	EN				49°21.10	126°31.90							
		1513	BE	NET		014	49°21.12	126°31.90	32	22					BONGO-VNH
		1535	BE	SET		015	49°19.7	126°33.08	58						TRAWL
03	EP02	1633	BE	CTD		016	49°19.01	126°36.12	81			1	↓		BOT@10m
		1635	BO				49°19.05	126°36.11		70					(CHL, NUTS & SAL)
		1637	EN				49°19.08	126°36.11							
		1640	BE	NET		017	49°19.10	126°36.10	79	69					BONGO-VNH
		1703	BE	SET		018	49°18.8	126°37.37	93						TRAWL

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EP01: CTD cast was started without direction from the lab. Brought back to surface after reaching ~10m and then began again (unit was on the whole time).
Winds steady 30 kts, gusting >40 kts.

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
03	EP03	1802	BE	CTD		019	49°16.94	126°40.79	108			1	MT	NA	BOT @ 10 m
		1805	BO				49°16.97	126°40.77		98					(CHL, NUTS & SAL)
		1807	EN				49°17.00	126°40.77							
		1810	BE	NET		020	49°17.03	126°40.76	109	99					BONGO-VNH
		1832	BE	SET		021	49°16.78	126°41.81	110						TRAWL
03	EP04	1952	BE	CTD		022	49°14.54	126°45.68	118			1			BOT @ 10 m
		1955	BO				49°14.54	126°45.67		108					(CHL, NUTS & SAL)
		1957	EN				49°14.54	126°45.66							
		2000	BE	NET		023	49°14.55	126°45.69	118	108					BONGO-VNH
		2134	BE	SET		024	49°13.63	126°46.73							TRAWL
03	EP05	2226	BE	CTD		025	49°12.32	126°49.74	140			1			BOT @ 10 m
		2228	BO				49°12.31	126°49.76		130					(CHL, NUTS & SAL)
		2231	EN				49°12.31	126°49.78							
		2234	BE	NET		026	49°12.30	126°49.81	138	128					BONGO-VNH
		2257	BE	SET		027	49°11.78	126°50.81	143						TRAWL

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EP04: Doors crossed during first trawl attempt. Boat & fire drill @ 2100h, then sent trawl out again.

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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							
03	EP06	2350	BE	CTD		028	49°10.22	126°54.31	180			1	MT	NA	BOT@10m
		2353	BO				49°10.20	126°54.36		170					(CHL, NUTS & SAL)
		2356	EN				49°10.19	126°54.39							
04		0000	BE	NET		029	49°10.13	126°54.46	183	150					BONGO-VNH
		0023	BE	SET		030	49°09.51	126°55.50	210						TRAWL
END OF DAY															
04	IV102	1507	BE	CTD		031	50°05.74	127°14.84	75			1			BOT@10m
		1508	BO				50°05.74	127°14.84		65					(CHL, NUTS & SAL)
		1510	EN				50°05.73	127°14.83							
		1514	BE	NET		032	50°05.72	127°14.81	80	70					BONGO-VNH
		1535	BE	SET		033	50°05.17	127°15.20	188						TRAWL
04	IV103	1639	BE	CTD		034	49°59.95	127°13.09	165			1	↓		BOT@10m
		1642	BO				49°59.93	127°13.08		155					(CHL, NUTS & SAL)
		1645	EN				49°59.93	127°13.09							
		1648	BE	NET		035	49°59.93	127°13.08	165	150					BONGO-VNH
		1710	BE	SET		036	49°59.52	127°13.62	160						TRAWL

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1V102 Kyuquot Sound

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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							
04	V104	1822	BE	CTD		037	49°55.38	127°20.27	55			1	MT	NA	BOT @ 10m
		1823	BO				49°55.39	127°20.28		45					(CHL, NUTS & SAL)
		1825	EN				49°55.40	127°20.32							
		1827	BE	NET		038	49°55.40	127°20.38	55	45					BONGO-VNH
		1847	BE	SET		039	49°54.86	127°21.65	58						TRAWL
04	V105	1952	BE	CTD		040	49°52.26	127°25.33	62			1			BOT @ 10m
		1953	BO				49°52.25	127°25.34		52					(CHL, NUTS & SAL)
		1955	EN				49°52.23	127°25.36							
		2007	BE	NET		041	49°52.15	127°25.51	65	55					BONGO-VNH
		2025	BE	SET		042	49°51.59	127°26.41	65						TRAWL
04	V106	2130	BE	CTD		043	49°47.92	127°31.50	82			1			BOT @ 10m
		2131	BO				49°47.91	127°31.53		72					(CHL, NUTS & SAL)
		2133	EN				49°47.90	127°31.56							
		2136	BE	NET		044	49°47.89	127°31.60	85	75					BONGO-VNH
		2153	BE	SET		045	49°47.42	127°32.43	101						TRAWL

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							Latitude	Longitude							
04	VI07	2315	BE	CTD		046	49°48.34	127°40.42	233			1	MT	NA	BOT @ 10m
		2319	BO				49°48.34	127°40.41		220					(CHL, NUTS & SAL)
		2323	EN				49°48.32	127°40.41							
		2326	BE	NET		047	49°48.33	127°40.44	243	150					BONGO-VNH
		2346	BE	SET		048	49°48.92	127°39.53	190						TRAWL
05	VI08	0041	BE	CTD		049	49°51.40	127°34.94	82			1			BOT @ 10m
		0042	BO				49°51.39	127°34.98		72					(CHL, NUTS & SAL)
		0044	EN				49°51.38	127°34.98							
		0048	BE	NET		050	49°51.33	127°34.05	80	70					BONGO-VNH
		0105	BE	SET		051	49°51.74	127°34.45	90						TRAWL
≡	END OF DAY														
05	T07	1506	BE	CTD		052	50°49.30	129°14.46	104			1	↓		BOT @ 10m
		1508	BO				50°49.31	129°14.47		95					(CHL, NUTS & SAL)
		1510	EN				50°49.32	129°14.48							
		1513	BE	NET		053	50°49.32	129°14.48	106	96					BONGO-VNH
		1532	BE	SET		054	50°50.00	129°13.76	79						TRAWL

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
05	T06	1659	BE	CTD		055	50°55.97	129°00.26	57			1	MT	NA	BOT @ 10m
		1700	BO				50°55.98	129°00.26		47					(CHL, NUTS & SAL)
		1701	EN				50°55.99	129°00.26							
		1705	BE	NET		056	50°56.01	129°00.27	57	47					BONGO - VNH
		1724	BE	SET		057	50°56.74	128°59.35	62						TRAWL
05	T05	1827	BE	CTD		058	51°00.14	128°51.66	59			1			BOT @ 10m
		1828	BO				51°00.15	128°51.66		49					(CHL, NUTS & SAL)
		1830	EN				51°00.16	128°51.65							
		1832	BE	NET		059	51°00.18	128°51.64	60	50					BONGO - VNH
		1848	BE	SET		060	51°00.80	128°50.48	58						TRAWL
05	T04	1953	BE	CTD		061	51°04.50	128°43.06	63			1	↓		BOT @ 10m
		1955	BO				51°04.51	128°43.03		53					(CHL, NUTS & SAL)
		1956	EN				51°04.52	128°43.02							
		2008	BE	NET		062	51°04.62	128°42.82	64	54					BONGO - VNH
		2024	BE	SET		063	51°05.23	128°41.69	65						TRAWL

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							Latitude	Longitude							
05	T03	2122	BE	CTD		064	51°08.36	128°35.57	138			1	MT	NA	BOT @ 10m
		2124	BO				51°08.37	128°35.54		128					(CHL, NUTS & SAL)
		2127	EN				51°08.36	128°35.52							
		2130	BE	NET		065	51°08.34	128°35.45	138	128					BONGO-VNH
		2147	BE	SET		066	51°08.90	128°34.41	NA						TRAWL
05	T02	2341	BE	CTD		067	51°12.33	128°27.87	186			1			BOT @ 10m
		2344	BO				51°12.30	128°27.81		175					(CHL, NUTS & SAL)
		2348	EN				51°12.27	128°27.74							
		2351	BE	NET		068	51°12.20	128°27.68	187	150					BONGO-VNH
06		0009	BE	SET		069	51°12.52	128°26.88	183						TRAWL
06	T01	0122	BE	CTD		070	51°16.90	128°20.62	78			1	↓		BOT @ 10m
		0123	BO				51°16.92	128°20.61		68					(CHL, NUTS & SAL)
		0125	EN				51°16.94	128°20.63							
		0128	BE	NET		071	51°16.96	128°20.65	79	69					BONGO-VNH
		0144	BE	SET		072	51°16.46	128°20.08	74						TRAWL
	END of DAY														

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Engine shut-down between T03 & T02 to replace fuel pump.

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							Latitude	Longitude							
06	QCST01	1514	BE	CTD		073	50°57.39	127°44.42	325			1	MT	NA	BOT @ 10m
		1520	BO				50°57.39	127°44.46		250					(CHL, NUTS & SAL)
		1525	EN				50°57.48	127°44.45							
		1527	BE	NET		074	50°57.50	127°44.39	252	150					BONGO-VNH
		1547	BE	SET		075	50°57.11	127°43.53	338						TRAWL
06	QCST02	1659	BE	CTD		076	50°53.06	127°36.82	414			1			BOT @ 10m
		1704	BO				50°53.06	127°36.80		250					(CHL, NUTS & SAL)
		1709	EN				50°53.05	127°36.80							
		1712	BE	NET		077	50°53.05	127°36.79	414	150					BONGO-VNH
		1731	BE	SET		078	50°52.77	127°35.91	358						TRAWL
06	QCST03	1905	BE	CTD		079	50°48.24	127°26.49	112			1	↓		BOT @ 10m
		1907	BO				50°48.21	127°26.44		100					(CHL, NUTS & SAL)
		1909	EN				50°48.18	127°26.42							
		1913	BE	NET		080	50°48.16	127°26.40	115	105					BONGO-VNH
		1929	BE	SET		081	50°47.92	127°34.00	233						TRAWL

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Queen Charlotte Strait.

QCST02: Winds 20⁺ knots & strong current. CTD wire had lots of aft lead during cast.

QCST03: Strong wind & wind over tide conditions. SOG ~ 1-2 kts during cast.

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
06	QCST04	2053	BE	CTD		082	50°43.29	127°15.97	208			1	MT	NA	BOT@10m
		2057	BO				50°43.31	127°15.94		195					(CHL, NUTS & SAL)
		2101	EN				50°43.32	127°15.88							
		2104	BE	NET		083	50°43.33	127°15.86	217	150					BONGO-VNH
		2123	BE	SET		084	50°43.37	127°14.59	NA						TRAWL
06	QCST05	2220	BE	CTD		085	50°42.37	127°07.66	129			1			BOT@10m
		2222	BO				50°42.40	127°07.64		118					(CHL, NUTS & SAL)
		2225	EN				50°42.41	127°07.63							
		2228	BE	NET		086	50°42.44	127°07.61	133	123					BONGO-VNH
		2247	BE	SET		087	50°42.53	127°06.43	175						TRAWL
06	QCST06	2356	BE	CTD		088	50°41.09	126°57.11	175			1			BOT@10m
		2358	BO				50°41.10	126°57.06		165					(CHL, NUTS & SAL)
07		0001	EN				50°41.10	126°57.05							
		0004	BE	NET		089	50°41.11	126°57.00	176	150					BONGO-VNH
		0024	BE	SET		090	50°41.12	126°55.76	190						TRAWL
END of DAY															

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

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QCST04: Winds steady 35 kts, gusting >40 kts.

QCST05/06: Deckhands noticed Nisken bottle release mechanism has become noticeably looser. There is a possibility the bottle is being triggered involuntarily at some point during up/down cast (no way to tell until sal's are run?) Trying to fix both Niskens prior to tomorrow's start. [Engineer managed to fix both, so problem solved... for now!]

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
07	QCST07	1506	BE	CTD		091	50°37.97	126°48.40	150			1	MT	NA	BOT@10m
		1509	Bo				50°37.99	126°48.49		140					(CHL, NUTS & SAL)
		1511	EN				50°38.01	126°48.31							(*) →
		1521	BE	NET		092	50°38.00	126°48.20	150	140					BONGO-VNH
		1540	BE	SET		093	50°38.78	126°47.34	150						TRAWL
07	QCST08	1618	BE	CTD		094	50°40.90	126°45.43	110			1			BOT@10m
		1620	Bo				50°40.94	126°45.47		100					(CHL, NUTS & SAL)
		1622	EN				50°40.97	126°45.49							
		1625	BE	NET		095	50°41.02	126°45.55	118	108					BONGO-VNH
		1643	BE	SET		096	50°42.14	126°46.15	131						TRAWL
07	QCST09	1743	BE	CTD		097	50°45.98	126°50.64	161			1	↓		BOT@10m
		1746	Bo				50°46.02	126°50.74		150					(CHL, NUTS & SAL)
		1749	EN				50°46.04	126°50.81							
		1752	BE	NET		098	50°46.10	126°50.95	164	150					BONGO-VNH
		1810	BE	SET		099	50°45.85	126°52.63	104						TRAWL

Cast Type:

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NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

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Notes:

Time Code:

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

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⊗ See note at end of day regarding missing data terminal cap.

QCST07: Drifting at >2 kts. Niskin bottle hit platform & broke on first attempt. Deployed 2nd Niskin @ 1515 to get water sample, CTD on the whole time.

Trawl ended early due to presence of dolphins around the ship.

QCST09: Drifting at >2 kts.

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
07	QCST10	1950	BE	CTD		100	50°47.71	127°00.91	128			1	MT	NA	BOT @ 10m
		1952	BO				50°47.68	127°00.93		118					(CHL, NUTS & SAL)
		1954	EN				50°47.65	127°00.92							
		1958	BE	NET		101	50°47.61	127°00.94	132	122					BONGO-VNH
		2017	BE	SET		102	50°47.55	127°02.01	163						TRAWL
07	QCST11	2128	BE	CTD		103	50°49.18	127°12.42	152			1			BOT @ 10m
		2131	BO				50°49.17	127°12.41		142					(CHL, NUTS, SAL)
		2134	EN				50°49.13	127°12.41							
		2137	BE	NET		104	50°49.11	127°12.43	160	150					BONGO-VNH
		2156	BE	SET		105	50°48.81	127°13.55	137						TRAWL
07	QCST12	2300	BE	CTD		106	50°48.21	127°21.12	129			1	↓		BOT @ 10m
		2302	BO				50°48.19	127°21.14		119					(CHL, NUTS, SAL)
		2305	EN				50°48.17	127°21.16							
		2308	BE	NET		107	50°48.15	127°21.21	115	105					BONGO-VNH
		2326	BE	SET		108	50°47.95	127°22.23	201						TRAWL

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Bottle Firing Method:

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Notes:

Time Code:

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

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Month <u>FEB</u>		Year <u>2011</u>				Ship <u>W.E. RICKER</u>				Cruise ID <u>2011-02</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							
08	QCST13	0036	BE	CTD		109	50°48.00	127°33.11	355			1	MT	NA	BOT @ 10m
		0041	BO				50°48.01	127°33.14		250					(CHL, NUTS, SAL)
		0045	EN				50°48.00	127°33.14							
		0049	BE	NET		110	50°47.98	127°33.18	353	150					BONGO-VNH
		0107	BE	SET		111	50°48.15	127°34.38	360						TRAWL
≡ END of DAY															
08	QCSD01	1512	BE	CTD		112	50°55.23	128°11.48	41			1			BOT @ 10m
		1512	BO				50°55.23	128°11.51		30					(CHL, NUTS & SAL)
		1513	EN				50°55.21	128°11.54							
		1516	BE	NET		113	50°55.22	128°11.63	41	31					BONGO-VNH
		1534	BE	SET		114	50°54.78	128°13.16	40						TRAWL
08	QCSD02	1645	BE	CTD		115	50°51.87	128°24.15	43			1	↓		BOT @ 10m
		1646	BO				50°51.87	128°24.18		33					(CHL, NUTS & SAL)
		1647	EN				50°51.87	128°24.20							
		1650	BE	NET		116	50°51.91	128°24.25	46	36					BONGO-VNH
		1707	BE	SET		117	50°51.10	128°25.57	49						TRAWL

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Bottle Firing Method:

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Notes:

Time Code:

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End of day: [QCST07-13] Protective cap was left off from last night's data download. Temp/sal channels from all of today's casts are suspect. Terminals rinsed w/ MilliQ water and dried then coated w/ Silicone lube.

batt: 11.0v

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Month FEB				Year 2011			Ship W.E. RICKER				Cruise ID 2011-02				
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							
08	VI09	1814	BE	CTD		118	50°45.45	128°28.96	67			1	MT	NA	BOT @ 10m
		1815	BO				50°45.46	128°28.97		57					(CHL, NUTS & SAL)
		1816	EN				50°45.47	128°28.98							
		1819	BE	NET		119	50°45.49	128°28.98	66	56					BONGO-VNH
		1835	BE	SET		120	50°44.78	128°28.43	56						TRAWL
08	VI10	1949	BE	CTD		121	50°37.87	128°23.81	64			1			BOT @ 10m
		1950	BO				50°37.85	128°23.83		54					(CHL, NUTS & SAL)
		1952	EN				50°37.85	128°23.84							
		1955	BE	NET		122	50°37.82	128°23.85	65	55					BONGO-VNH
		2010	BE	SET		123	50°37.00	128°23.27	67						TRAWL
08	VI11	2111	BE	CTD		124	50°31.81	128°17.42	61			1	↓		BOT @ 10m
		2112	BO				50°31.80	128°17.43		51					(CHL, NUTS & SAL)
		2114	EN				50°31.79	128°17.45							
		2116	BE	NET		125	50°31.76	128°17.49	62	52					BONGO-VNH
		2133	BE	SET		126	50°30.84	128°16.66	59						TRAWL

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Bottle Firing Method:

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Notes:

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Month FEB				Year 2011			Ship W.E. RICKER				Cruise ID 2011-02				
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							
08	VI12	2238	BE	CTD	127		50°26.07	128°10.08	85			1	MT	NA	BOT@10m
		2240	BO				50°26.09	128°10.12		75					(CHL, NUTS & SAL)
		2241	EN				50°26.10	128°10.12							
		2244	BE	NET	128		50°26.14	128°10.14	80	70					BONGO-VNH
		2301	BE	SET	129		50°25.76	128°09.45	80						TRAWL
09	VI13	0004	BE	CTD	130		50°27.45	128°07.76	56			1			BOT@10m
		0005	BO				50°27.46	128°07.76		46					(CHL, NUTS & SAL)
		0006	EN				50°27.46	128°07.76							
		0008	BE	NET	131		50°27.49	128°07.76	55	45					BONGO-VNH
		0023	BE	SET	132		50°27.03	128°06.84	55						TRAWL
≡ END OF DAY															
09	IVI04	1507	BE	CTD	133		50°24.06	127°29.39	126			1			BOT @10m
		1510	BO				50°24.06	127°29.39		120					(CHL, NUTS & SAL)
		1513	EN				50°24.06	127°29.40							
		1515	BE	NET	134		50°24.07	127°29.40	127	117					BONGO-VNH
		1535	BE	SET	135		50°24.87	127°30.14	136						TRAWL

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Bottle Firing Method:

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Notes:

Time Code:

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

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batt. 11.0v

IV104 Quatsino Sound

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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							
09	IVIO5	1612	BE	CTD		136	50°27.81	127°32.30	179			1	MT	NA	BOT @ 10m
		1615	BO				50°27.83	127°32.33		169					(CHL, NUTS & SAL)
		1618	EN				50°27.85	127°32.36							
		1620	BE	NET		137	50°27.86	127°32.37	179	150					BONGO-VNH
		1640	BE	SET		138	50°28.62	127°33.32	181						TRAWL
09	IVIO6	1741	BE	CTD		139	50°30.58	127°41.64	132			1			BOT @ 10m
		1744	BO				50°30.54	127°41.66		122					(CHL, NUTS & SAL)
		1746	EN				50°30.50	127°41.64							
		1748	BE	NET		140	50°30.48	127°41.63	159	150					BONGO-VNH
		1808	BE	SET		141	50°30.05	127°42.84	115						TRAWL
09	IVIO7	2011	BE	CTD		142	50°35.05	127°27.05	64			1	↓		BOT @ 10m
		2012	BO				50°35.06	127°27.04		54					(CHL, NUTS & SAL)
		2014	EN				50°35.06	127°27.03							
		2016	BE	NET		143	50°35.07	127°27.00	65	55					BONGO-VNH
		2032	BE	SET		144	50°34.93	127°27.99	58						TRAWL

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Notes:

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IV107: Bridge postponed cast once CTD was in the water (@the surface) → ~1 min extra at start of cast

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Month <u>FEB</u>				Year <u>2011</u>				Ship <u>W.E. RICKER</u>				Cruise ID <u>2011-02</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							
09	IV108	2122	BE	CTD		145	50°35.03	127°35.58	120			1	MT	NA	BOT@10m
		2124	BO				50°35.03	127°35.59		110					(CHL, NUTS & SAL)
		2126	EN				50°35.04	127°35.61							(*) →
		2128	BE	NET		146	50°35.05	127°35.62	121	111					BONGO-VNH
		2147	BE	SET		147	50°35.19	127°36.76	113						TRAWL
09	IV109	2237	BE	CTD		148	50°35.82	127°44.45	77			1			BOT @10m
		2238	BO				50°35.83	127°44.46		67					(CHL, NUTS & SAL)
		2240	EN				50°35.83	127°44.46							
		2242	BE	NET		149	50°35.85	127°44.42	77	67					BONGO-VNH
		2259	BE	SET		150	50°35.63	127°43.23	87						TRAWL
END of DAY															
10	IV110	1504	BE	CTD		151	50°29.35	127°51.05	58			1	↓		BOT@10m
		1505	BO				50°29.35	127°51.04		48					(CHL, NUTS & SAL)
		1506	EN				50°29.35	127°51.04							
		1510	BE	NET		152	50°29.34	127°51.03	58	48					BONGO-VNH
		1531	BE	SET		153	50°28.74	127°52.07	179						TRAWL

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Notes:

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

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IV108: No sal @ this station

batt: 11.0V

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Month FEB		Year 2011		Ship W.E. RICKER				Cruise ID 2011-02							
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	VI11	1625	BE	CTD		154	50°28.35	127°57.18	145			1	MT	NA	BOT@10m
		1627	BO				50°28.34	127°57.20		135					(CHL, NUTS & SAL)
		1630	EN				50°28.33	127°57.22							
		1635	BE	NET		155	50°28.32	127°57.14	142	132					BONGO-VNH
		1652	BE	SET		156	50°27.37	127°57.05	72						TRAWL
10	VI14	1812	BE	CTD		157	50°21.43	128°05.85	81			1			BOT@10m
		1813	BO				50°21.43	128°05.82		71					(CHL, NUTS & SAL)
		1815	EN				50°21.43	128°05.79							
		1818	BE	NET		158	50°21.42	128°05.78	80	70					BONGO-VNH
		1833	BE	SET		159	50°20.98	128°06.56	92						TRAWL
10	VI15	1948	BE	CTD		160	50°18.00	128°12.13	171			1	↓		BOT@10m
		1950	BO				50°18.02	128°12.08		161					(CHL, NUTS & SAL)
		1954	EN				50°18.03	128°12.06							
		1957	BE	NET		161	50°18.02	128°12.04	170	150					BONGO-VNH
		2018	BE	SET		162	50°17.82	128°12.82	183						TRAWL
≡ END of DAY															

Cast Type:

BOT = Bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD
 SET = Fish Set

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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
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Notes:

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Cut off ops early to run & hide from storm.

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Month FEB		Year 2011		Ship W.E. RICKER		Cruise ID 2011-02									
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	IVI12	1508	BE	CTD		163	49°52.52	126°49.30	219			1	MT	NA	BOT@10m
		1512	BO				49°52.49	126°49.36		210					(CHL, NUTS & SAL)
		1516	EN				49°52.47	126°49.39							
		1519	BE	NET		164	49°52.45	126°49.46	221	150					BONGO-VNH
		1537	BE	SET		165	49°52.06	126°50.77	226						TRAWL
11	IVI13	1629	BE	CTD		166	49°51.67	126°55.96	195			1			BOT@10m
		1632	BO				49°51.72	126°55.95		185					(CHL, NUTS & SAL)
		1636	EN				49°51.74	126°55.93							
		1638	BE	NET		167	49°51.77	126°55.95	191	150					BONGO-VNH
		1655	BE	SET		168	49°51.37	126°56.19	175						TRAWL
11	IVI14	1742	BE	CTD		169	49°50.30	126°59.73	70			1			BOT@10m
		1744	BO				49°50.30	126°59.72		60					(CHL, NUTS & SAL)
		1745	EN				49°50.31	126°59.72							
		1748	BE	NET		170	49°50.34	126°59.70	67	57					BONGO-VNH
		1804	BE	SET		171	49°49.69	127°00.29	51						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

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IVI12: Esperanza Inlet

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Month FEB

Year 2011

Ship W.E. RICKER

Cruise ID 2011-02

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	VI16	1904	BE	CTD		172	49°46.07	127°05.54	51			1	MT	NA	BOT@10m
		1905	BO				49°46.07	127°05.52		41					(CHL, NUTS & SAL)
		1906	EN				49°46.07	127°05.50							
		1909	BE	NET		173	49°46.07	127°05.40	51	40					
		1926	BE	SET		174	49°45.51	127°06.33	58						BONGO-VNH
															TRAWL
11	VI17	2027	BE	CTD		175	49°43.12	127°10.30	97			1			BOT@10m
		2028	BO				49°43.15	127°10.26		87					(CHL, NUTS & SAL)
		2030	EN				49°43.19	127°10.24							
		2033	BE	NET		176	49°43.17	127°10.23	96	86					
		2055	BE	SET		177	49°42.74	127°10.83	104						BONGO-VNH
															TRAWL
11	VI18	2210	BE	CTD		178	49°39.39	127°15.92	130			1			BOT@10m
		2212	BO				49°39.43	127°15.89		120					(CHL, NUTS & SAL)
		2215	EN				49°39.45	127°15.88							
		2218	BE	NET		179	49°39.42	127°15.90	128	118					
		2242	BE	SET		180	49°39.34	127°14.94	127						BONGO-VNH
															TRAWL
END of DAY															

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

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VI 16-18

Winds SE 35kts, gusting >40kts. Building seas, blowing spray. Off Esperanza Inlet.

batt: 110v

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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	IVI15	1500	BE	CTD		181	49°39.54	126°23.22	150			1	MT	NA	BOT@10m
		1502	BO				49°39.55	126°23.20		140					(CHL, NUTS & SAL)
		1505	EN				49°39.55	126°23.20							
		1508	BE	NET		182	49°39.55	126°23.19	143	133					BONGO-VNH
		1531	BE	SET		183	49°39.14	126°22.71	171						TRAWL
12	IVI16	1656	BE	CTD		184	49°40.05	126°09.55	353			1			BOT@10m
		1701	BO				49°40.04	126°09.54		250					(CHL, NUTS & SAL)
		1705	EN				49°40.02	126°09.55							
		1708	BE	NET		185	49°40.01	126°09.53	352	150					BONGO-VNH
		1728	BE	SET		186	49°40.01	126°10.52	354						TRAWL
12	IVI17	1949	BE	CTD		187	49°38.05	126°29.69	132			1	V		BOT@10m
		1952	BO				49°38.03	126°29.69		122					(CHL, NUTS & SAL)
		1954	EN				49°38.02	126°29.66							
		1958	BE	NET		188	49°38.02	126°29.70	133	120					BONGO-VNH
		2016	BE	SET		189	49°37.55	126°30.18	152						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

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IVI15: Nootka Sound.

IVI17: Winds steady 40 kts, gusting > 50 kts

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Month FEB				Year 2011			Ship W.E. RICKER				Cruise ID 2011-02				
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	IVI18	2124	BE	CTD		190	49°37.76	126°36.24	153			1	MT	NA	BOT@10m
		2127	BO				49°37.77	126°36.23		142					(CHL, NUTS & SAL)
		2130	EN				49°37.77	126°36.21							
		2132	BE	NET		191	49°37.78	126°36.19	152	140					BONGO-VNH
		2204	BE	SET		192	49°39.33	126°36.12	153						TRAWL
≡	END of DAY														
13	VI19	1507	BE	CTD		193	49°05.73	126°00.71	44			1			BOT@10m
		1508	BO				49°05.73	126°00.70		34					(CHL, NUTS & SAL)
		1509	EN				49°05.73	126°00.69							
		1512	BE	NET		194	49°05.70	126°00.69	43	33					BONGO-VNH
		1530	BE	SET		195	49°05.28	126°01.80	50						TRAWL
13	VI20	1641	BE	CTD		196	49°01.69	126°09.32	69			1	↓		BOT@10m
		1642	BO				49°01.69	126°09.31		59					(CHL, NUTS & SAL)
		1644	EN				49°01.70	126°09.30							
		1647	BE	NET		197	49°01.69	126°09.26	70	60					BONGO-VNH
		1704	BE	SET		198	49°01.21	126°10.17	70						TRAWL

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

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

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batt: 13.0 (changed prior to downloading day's casts)

VI19: Off Tofino. Swells >3m.

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02				Page 23 of 49	
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	VI21	1807	BE	CTD		199	48°57.68	126°15.94	115			1	MT	NA	BOT @ 10m		
		1809	BO				48°57.69	126°15.93		105					(CHL, NUTS & SAL)		
		1811	EN				48°57.69	126°15.93									
		1814	BE	NET		200	48°57.70	126°15.95	115								
		1834	BE	SET		201	48°57.26	126°17.03	120						BONGO-VNH TRAWL		
13	VI22	1942	BE	CTD		202	48°53.05	126°21.59	153			1			BOT @ 10m		
		1945	BO				48°53.06	126°21.58		143					(CHL, NUTS & SAL)		
		1947	EN				48°53.07	126°21.57									
		1952	BE	NET		203	48°53.08	126°21.55	152	142							
		2013	BE	SET		204	48°52.66	126°22.50	156						BONGO-VNH TRAWL		
13	VI23	2212	BE	CTD		205	48°47.85	126°10.94	126			1			BOT @ 10m		
		2215	BO				48°47.86	126°10.93		116					(CHL, NUTS & SAL)		
		2218	EN				48°47.88	126°10.93									
		2221	BE	NET		206	48°47.87	126°10.92	126	116							
		2241	BE	SET		207	48°48.65	126°10.83	123						BONGO-VNH TRAWL		

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Code:

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

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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	VI24	2354	BE	CTD		208	48°52.90	126°02.59	70			1	MT	NA	BOT@10m
		2355	BO				48°52.90	126°02.59		60					(CHL, NUTS & SAL)
		2357	EN				48°52.91	126°02.58							
14		0000	BE	NET		209	48°52.89	126°02.57	70						BONGO-VNH
		0015	BE	SET		210	48°53.62	126°01.88	69						TRAWL
14	END of DAY														
14	IVI19	1626	BE	CTD		211	48°55.11	125°27.69	51			1			BOT@10m
		1627	BO				48°55.10	125°27.67		41					(CHL, NUTS & SAL)
		1628	EN				48°55.10	125°27.66							
		1631	BE	NET		212	48°55.09	125°27.59	51	40					BONGO-VNH
		1647	BE	SET		213	48°55.77	125°26.72	50						TRAWL
14	IVI20	1811	BE	CTD		214	48°59.55	125°18.45	34			1	↓		BOT@10m
		1812	BO				48°59.55	125°18.44		24					(CHL, NUTS & SAL)
		1813	EN				48°59.55	125°18.43							
		1815	BE	NET		215	48°59.56	125°18.43	34						BONGO-VNH
		1831	BE	SET		216	48°58.88	125°19.36	40						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

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batt: 12.7v

IVIZ2: No CTD cast logged at this station. Suspect switch not turned on.

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Month FEB				Year 2011				Ship W.E. RICKER				Cruise ID 2011-02			
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	IVI21	2111	BE	CTD		217	48°54.42	125°01.59	129			1	MT	NA	BOT@10m
		2113	BO				48°54.42	125°01.60		119					(CHL, NUTS & SAL)
		2116	EN				48°54.42	125°01.61							
		2119	BE	NET		218	48°54.41	125°01.61	132	122					BONGO-VNH
		2138	BE	SET		219	48°53.77	125°02.52	145						TRAWL
14	IVI22	2229	BE	CTD		220	48°51.94	125°07.12	128			1			BOT@10m
		2232	BO				48°51.93	125°07.15		118					(CHL, NUTS & SAL)
		2235	EN				48°51.93	125°07.21							⊗ COMMENT PREV PG.
		2238	BE	NET		221	48°51.92	125°07.32	129	119					BONGO-VNH
		2258	BE	SET		222	48°52.57	125°08.15	132						TRAWL
≡	END of DAY	(batt. 12.5v)													
15	JF06	1502	BE	CTD		223	48°33.22	124°42.05	102			1	↓		BOT@10m
		1504	BO				48°33.25	124°42.01		92					(CHL, NUTS & SAL)
		1506	EN				48°33.28	124°41.97							Drifting @ 1-2 kts
		1508	BE	NET		224	48°33.35	124°41.83	96	86					BONGO-VNH
		1527	BE	SET		225	48°33.38	124°39.86	78						TRAWL
Cast Type: USW - Sea Water Loop 1 Bottle Firing 1 Bottle Firing															

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

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