DAILY SCIENCE LOG BOOK

MISSION NUMBER

2014 - 24

DATE: From: 01 JUNE 2014 to: 11 JUNE 2014

VESSEL: F/V VIKING STORM

PROJECT(S): SOG JUVENILE SALMON [C. NEVILLE]

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

WaterProperties.ca

Captain: Chris Roberts
~~Second Officer~~:
Fishing Master: Chris Roberts

~~First Officer~~ Engineer: Rory Johnson
~~Third Officer~~: Sean Tracey
Wes Heggland

Mission Participants / Agencies: DFO

Scientific Personnel: Chief Scientist: Chrys Neville

Name	Watch	Cabin	Name	Watch	Cabin
Carol Cooper			Dylan Conover		
Lindsay Gardiner					
Julia Bradshaw					
Mary Thess					

Second leg of Mission: Chief Scientist:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: Seagoing Notebook #16
Data acquisition program: SeaTerm v1.59
CTD deck unit make: n/a model: n/a serial number: n/a

Primary CTD
Make: Seabird model: SBE25 serial number: 0404
Primary temperature serial number: 4484
Primary conductivity serial number: 3184
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: SBE 43 s/n: 0047 (**P**), **S** or **NO** pump?
PAR sensor: Model: s/n:
Other sensors: Pressure (last calib. Mar 2012) s/n: 0573 (**P**), **S** or **NO** pump?
Other sensors: pH (last calib. Apr 2011?) s/n: 0852 **P, S** or (**NO**) pump?
Other sensors: s/n: **P, S** or **NO** pump?
Other sensors: s/n: **P, S** or **NO** pump?

confile: 25-0404 March 2014 DO and pH.xmlcon

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?
Other sensors: s/n: **P, S** or **NO** pump?
Other sensors: s/n: **P, S** or **NO** pump?
Other sensors: s/n: **P, S** or **NO** pump?

CTD calibration bottle location (height above CTD in metres):

CTD winch/hydraulics on this ship have been roughly calculated at ~0.6 m/s. Higher speeds are possible, but creates noise issues in the lab space.

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Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2014 | **Ship** F/V VIKING STORM | **Cruise ID** 2014-24

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	Set 1	1310	BE	SET		001	48°14.27	123°52.0	163						TRAWL - SURFACE
02	Set 2	1357	BE	SET		002	49°14.5	123°51.73	212						TRAWL - SURFACE
	↓	1445	BE	CTD		003	49°15.86	123°48.35	428			—	MT	—	
		1454	BO							250					
		1502	EN												
	↓	1506	BE	NET		004	49°15.9	123°48.4	428	150					BONGO
02	Set 3	1543	BE	SET		005	49°17.47	123°43.6	222						TRAWL - 15m
02	Set 4	1646	BE	SET		006	49°20.5	123°36.3	145						TRAWL - SURFACE
02	Set 5	1750	BE	SET		007	49°21.83	123°30.92	165						TRAWL - 30m

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: _____

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							Latitude	Longitude							
02	Set 6	1853	BE	SET		008	49°24.0	123°38.3	124						TRAWL - 15m
	↓														
		1942	BE	NET		009	49°24.62	123°42.44	125	115					BONGO
	↓														
		1951	BE	CTD		010	49°24.6	123°42.4	135	125		—	MT	—	
02	Set 7	2023	BE	SET		011	49°26.4	123°46.6	160						TRAWL - SURFACE
END OF DAY															
03	Set 8	1317	BE	SET		012	49°26.9	124°02.9	369						TRAWL - SURFACE
	↓														
		1402	BE	CTD		013	49°28.8	124°02.7	160			—	MT	—	(2) Note: pH buffer sol'n bottle not removed for this cast
	↓														
		1418	BE	NET		014	49°28.825	124°02.749	160	150					BONGO
03	Set 9	1450	BE	SET		015	49°30.6	124°05.9	416						TRAWL - 60m
	~	INTO FRENCH CREEK FOR FUEL PUMP REPAIRS						~							

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Day 1: Ship docked early to fix fuel pump & hydraulics issues.
CTD downloaded at end of day... converted & plotted. All seems fine?

⊛ Set 8: pH buffer sola bottle not removed for this cast.

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							Latitude	Longitude							
03	Set 10	2026	BE	SET		016	49°21.5	124°19.5	69						TRAWL - SURFACE
	↓														
		2125	BE	NET		017	49°21.575	124°14.333	266	150					BONGO
	↓	2133	BE	CTD		018	49°21.6	124°14.3	286	250		—	MT	—	
03	Set 11	2211	BE	SET		019	49°23.1	124°10.6	348						TRAWL - 15m
03	Set 12	2337	BE	SET		020	49°24.3	123°57.8	391						TRAWL - 30m
04	Set 13	0051	BE	SET		021	49°22.0	123°54.0	347						TRAWL - SURFACE
04	Set 14	0154	BE	SET		022	49°22.7	123°47.3	193						TRAWL - 15m
= END OF DAY															

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							Latitude	Longitude							
04	Set 15	13^{00}	BE	SET		023	49°22.6	124°20.9	109						TRAWL - SURFACE
04	Set 16	14^{10}	BE	SET		024	49°25.7	124°17.0	295						TRAWL - 15m
	↓	15^{00}	BE	CTD		025	49°23.7	124°13.4	313	250		—	MT	—	High current — CTD towed on upcast
	↓	15^{21}	BE	NET		026	49°23.738	124°13.360	313	150					BONGO
04	Set 17	1558	BE	SET		027	49°24.2	124°13.9	318						TRAWL - 45m
04	Set 18	1745	BE	SET		028	49°23.3	124°24.9	168						TRAWL - SURFACE
04	Set 19	18^{45}	BE	SET		029	49°23.8	124°31.0	106						TRAWL - 15m
	↓	1941	BE	NET		030	49°25.641	124°34.942	110	100					BONGO
	↓	1954	BE	CTD		031	49°25.6	124°34.9	114	105		—	MT	—	

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Time Code:
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→ Shackle caught in block

Set 19: Low flowmeter reading — unknown cause. (BONGO)

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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	Set 20	2008	BE	SET		032	49°26.1	124°35.9	101						TRAWL - SURFACE
04	Set 21	2104	BE	SET		033	49°28.3	124°35.9	139						TRAWL - 30m
04	Set 22	2155	BE	SET		034	49°29.5	124°30.7	252						TRAWL - SURFACE
04	Set 23	2258	BE	SET		035	49°32.7	124°25.9	110						TRAWL - 15m
	↓	2349	BE	CTD		036	49°33.8	124°21.8	340	250		—	MT	—	
05	↓	0010	BE	NET		037	49°33.772	124°21.822	340	150					BONGO
= END OF DAY															
05	Set 24	1309	BE	SET		038	50°18.6	125°16.9	112						TRAWL - 30m
	↓	1344	BE	CTD		039	50°18.3	125°18.6	114	105		—	MT	—	
	↓	1354	BE	NET		040	50°18.286	125°18.643	114	100					BONGO

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

Notes: _____

CTD downloaded at end of day (Day2 & 3 casts)... converted & plotted fine.
battery: 11.5v

~850 sec ⇒ 250m (return) so ~425 sec/250m ≅ 0.6m/s

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							Latitude	Longitude							
05	Set 25	1410	BE	SET		041	50° 17.7	125° 19.5	97						TRAWL - 15m
05	Set 26	1459	BE	SET		042	50° 17.8	125° 24.4	115						TRAWL - SURFACE
05	Set 27	1551	BE	SET		043	50° 21.2	125° 23.2	247						TRAWL - SURFACE
	↓	1621	BE	NET		044	50° 22.233	125° 21.411	200	150					BONGO
	↓	1629	BE	CTD		045	50° 22.2	125° 21.4	200	190		—	MT	—	
05	Set 28	1659	BE	SET		046	50° 23.5	125° 21.0	157						TRAWL - SURFACE
05	Set 29	1741	BE	SET		047	50° 25.9	125° 18.6	311						TRAWL - SURFACE
	↓	1816	BE	CTD		048	50° 27.1	125° 16.9	300	250		—	MT	—	
	↓	1836	BE	NET		049	50° 27.111	125° 16.884	300	150					BONGO

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

Notes: _____

Set 27: Bongo flowmeter didn't work — unknown cause

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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							
05	Set 30	19⁰⁰	BE	SET		050	50°27.5	125°19.2	132						TRAWL-SURFACE
05	Set 31	2019	BE	SET		051	50°28.6	125°22.9	109						TRAWL-SURFACE
	↓	2053	BE	NET		052	50°27.277	125°24.707	126	115					BONGO
	↓	21⁰⁰	BE	CTD		053	50°27.3	125°24.7	126	115		—	MT	—	
05	Set 32	2332	BE	SET		054	50°23.9	125°20.5	160						TRAWL-SURFACE
06	↓	0004	BE	CTD		055	50°23.826	125°20.359	187	175		—	MT	—	
06	↓	0020	BE	NET		056	50°23.8	125°20.4	197	150					BONGO
06	Set 33	0104	BE	SET		057	50°22.9	125°20.6	252						TRAWL-SURFACE
= END OF DAY															

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Notes: _____

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

Set 32: Compare C Nordic Quest Bongo at same station? ⇒ Didn't go to same target depth though so comparison will be difficult.

CTD downloaded, files converted & plotted.
battery: 11.6 v

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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							
06	Set 34	1310	BE	SET		058	50°18.6	125°05.6	241						TRAWL-SURFACE
	↓														
		1353	BE	CTD		059	50° 19.5	125°05.7	375	250		—	MT	—	
	↓														
		1414	BE	NET		060	50°19.541	125°05.690	375	150					BONGO
06	Set 35	1441	BE	SET		061	50°18.8	125°02.3	222						TRAWL-SURFACE
06	Set 36	1527	BE	SET		062	50°18.5	124°57.4	392						TRAWL-SURFACE
06	Set 37	1606	BE	SET		063	50°16.5	124°58.5	416						TRAWL-30m
06	Set 38	1653	BE	SET		064	50°13.7	124°58.3	320						TRAWL-SURFACE
	↓														
		1725	BE	NET		065	50°12.026	124°56.856	151	140					BONGO
	↓														
		1734	BE	CTD		066	50°12.0	124°56.8	135	125		—	MT	—	

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							Latitude	Longitude							
06	Set 39	1813	BE	SET		067	50°08.0	124°52.9	219						TRAWL-SURFACE
06	Set 40	1902	BE	SET		068	50°07.4	124°47.8	426						TRAWL-SURFACE
	↓	1935	BE	CTD		069	50°08.7	124°46.3	336	250		—	MT	—	
	↓	1954	BE	NET		070	50°08.668	124°46.261	315	150					BONGO
06	Set 41	2124	BE	SET		071	50°17.3	124°47.8	255						TRAWL-SURFACE
06	Set 42	2253	BE	SET		072	50°14.4	125°01.8	463						TRAWL-SURFACE
06	Set 43	2337	BE	SET		073	50°11.1	124°59.8	556						TRAWL-SURFACE
07	Set 44	0032	BE	SET		074	50°07.3	125°06.9	210						TRAWL-SURFACE
	END OF DAY														

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							Latitude	Longitude							
07	Set 45	1309	BE	SET		075	49°59.9	125°06.1	185						TRAWL-SURFACE
	↓	1415	BE	CTD		076	50°00.4	125°01.8	107	95		—	MT	—	
	↓	1427	BE	NET		077	50°00.436	125°01.756	106	95					BONGO
07	Set 46	1443	BE	SET		078	49°59.6	125°01.0	101						TRAWL-30m
07	Set 47	1549	BE	SET		079	49°55.4	125°55.4	225						TRAWL-15m
07	Set 48	1644	BE	SET		080	49°52.0	124°57.8	290						TRAWL-SURFACE
07	Set 49	1742	BE	SET		081	49°50.7	125°59.9							TRAWL-15m
	↓	1845	BE	CTD		082	49°48.2	124°58.1	72	60		—	MT	—	
	↓	1851	BE	NET		083	49°48.227	124°58.083	72	60					BONGO

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							Latitude	Longitude							
07	Sct 50	1910	BE	SET		084	49°48.5	124°56.3	94						TRAWL - SURFACE
07	Sct 51	2006	BE	SET		085	49°47.7	124°52.0	178						TRAWL - SURFACE
07	Sct 52	2058	BE	SET		086	49°50.1	124°47.4	160						TRAWL - 30m
07	Sct 53	2228	BE	SET		087	49°54.8	124°46.7	80						TRAWL - SURFACE
07	Sct 54	2330	BE	SET		088	49°53.7	124°39.1	112						TRAWL - 15m
08	↓	0025	BE	NET		089	49°51.609	124°36.162	163	150					BONGO
08	↓	0036	BE	CTD		090	49°51.6	124°36.2	156	145		—	MT	—	
~~END OF~~	~~DAY~~														

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Set 54: CTD not turned off after cast — data collection ends @ ~650 seconds.

End of day: Data downloaded, converted & plotted
Vmain = 11.3v

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							Latitude	Longitude							
08	Set 55	1304	BE	SET		091	49°47.0	124°42.1	195						TRAWL - SURFACE
	↓	1354	BE	CTD		092	49°45.9	124°45.7	349	250		—	MT	—	
	↓	1415	BE	NET		093	49°45.877	124°45.680	349	150					BONGO
08	Set 56	1431	BE	SET		094	49°45.4	124°46.4	332						TRAWL - 30m
08	Set 57	1509	BE	SET		095	49°42.8	124°48.3	116						TRAWL - SURFACE
08	Set 58	1626	BE	SET		096	49°36.16	124°39.16	131						TRAWL - 15m
08	Set 59	1720	BE	SET		097	49°36.91	124°41.52	133						TRAWL - SURFACE
	↓	1811	BE	NET		098	49°39.964	124°39.341	110	100					BONGO
	↓	1818	BE	CTD		099	49°40.0	124°39.3	121	110		—	MT	—	

Cast Type:
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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

Notes: _____

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

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2014 **Ship** F/V VIKING STORM **Cruise ID** 2014-24

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
08	Set 60	1833	BE	SET		100	49° 40.83	124° 39.05	158						TRAWL - 30m
08	Set 61	1934	BE	SET		101	49° 42.35	124° 37.60	330						TRAWL - 15m
	↓	2040	BE	CTD		102	49° 40.3	124° 33.1	244	230		—	MT	—	
	↓	2053	BE	NET		103	49° 40.285	124° 33.131	236	150					BONGO
08	Set 62	2127	BE	SET		104	49° 38.82	124° 30.80	320						TRAWL - 60m
08	Set 63	2221	BE	SET		105	49° 36.73	124° 27.51	331						TRAWL - SURFACE
= END OF DAY															
09	Set 64	1302	BE	SET		106	49° 30.0	124° 10.5	270						TRAWL - SURFACE
	↓	1400	BE	CTD		107	49° 31.3	124° 12.5	258	218 / 200		—	MT	—	⊛
	↓	1418	BE	NET		108	49° 31.321	124° 12.546	249	150					BONGO

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Bottle Firing Method:
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Time Code:
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Notes: ____

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⊛ On the edge of a steep ledge & in strong current. Depth went from 258 to 218m, so CTD stopped at ~200m and returned to surface.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2014 **Ship** F/V VIKING STORM **Cruise ID** 2014-24 Page 14 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							
09	Set 65	1509	BE	SET		109	49°30.6	124°05.95	414						TRAWL-30m
09	Set 66	1606	BE	SET		110	49°33.7	124°04.4	126						TRAWL-SURFACE
09	Set 67	1701	BE	SET		111	49°36.3	124°06.4	264						TRAWL-60m
09	Set 68	1803	BE	SET		112	49°37.2	124°12.6	343						TRAWL-15m
09	Set 69	1936	BE	SET		113	49°45.6	124°10.9	120						TRAWL-SURFACE
09	Set 70	2046	BE	SET		114	49°47.4	124°02.7	665						TRAWL-15m
	↓	2126	BE	NET		115	49°47.667	124°00.047	570	150					BONGO
	↓	2135	BE	CTD		116	49°47.7	124°00.0	478	250		—	MT	—	

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

Time Code:
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BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
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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

SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2014 **Ship** F/V VIKING STORM **Cruise ID** 2014-24

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	Set 71	2324	BE	SET		117	49°44.0	124°18.1	134						TRAWL-30m
10	↓	0013	BE	CTD		118	49°44.6	124°21.8	172	160		—	MT	—	
10	↓	0027	BE	NET		119	49°44.560	124°21.813	193	150					BONGO
10	Set 72	0058	BE	SET		120	49°43.9	124°25.8	122						TRAWL-SURFACE
= END OF DAY															
10	Set 73	1321	BE	SET		121	48°44.5	123°34.6	60						TRAWL-SURFACE
	↓	1354	BE	CTD		122	48°44.5	123°34.7	59	50		—	MT	—	
	↓	1400	BE	NET		123	48°44.503	123°34.687	59	50					BONGO
10	Set 74	1423	BE	SET		124	48°45.0	123°33.9	115						TRAWL-SURFACE

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Bottle Firing Method:
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UN = Up / No stop
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Time Code:
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BO = Bottom Time of Cast
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RE = Recover Mooring Time

Notes: ____

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

Data downloaded, converted & plotted.

Vmain = 11.2v

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2014 | **Ship** F/V VIKING STORM | **Cruise ID** 2014-24

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	Set 75	1457	BE	SET		125	48°44.1	123°33.5	83						TRAWL - SURFACE
10	Set 76	1541	BE	SET		126	48°44.3	123°33.3	113						TRAWL - 15m
	↓	1625	BE	NET		127	48°42.954	123°31.171	66	55					BONGO
	↓	1631	BE	CTD		128	48°43.0	123°31.2	164	55		—	MT	—	
10	Set 77	1711	BE	SET		129	48°43.6	123°25.3	76						TRAWL - SURFACE
10	Set 78	1901	BE	SET		130	48°52.5	123°14.5	145						TRAWL - SURFACE
	↓	1950	BE	CTD		131	48°51.7	123°13.2	136	125		—	MT	—	
	↓	2001	BE	NET		132	48°51.715	123°13.215	136	125					BONGO
10	Set 79	2055		SET		133	48°55.9	123°23.1	161						TRAWL - 15m

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Bottle Firing Method:
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Time Code:
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Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2014 | **Ship** F/V VIKING STORM | **Cruise ID** 2014-24

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	SET80	2201	BE	SET		134	49°01.0	123°31.9	160						TRAWL - SURFACE
	↓														
		2236	BE	NET		135	49°02.566	123°34.088	177	150					BONGO
	↓	2246	BE	CTD		136	49°02.6	123°34.1	167	155		—	MT	—	
10	Set81	2330	BE	SET		137	49°07.7	123°33.1	307						TRAWL - 30m
11	Set82	0027	BE	SET		138	49°08.9	123°27.0	288						TRAWL - SURFACE
= END OF DAY															
11	Set 83	1253	BE	SET		139	49°04.5	123°19.2	85						TRAWL - SURFACE
	↓														
		1345	BE	CTD		140	49°02.0	123°16.5	89	80		—	MT	—	
	↓	1353	BE	NET		141	49°02.021	123°16.510	98	85					BONGO

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EN = End Time of Cast
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RE = Recover Mooring Time

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

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2014 | **Ship** F/V VIKING STORM | **Cruise ID** 2014-24

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
11	Set 84	1442	BE	SET		142	49°09.8	123°20.0	110						TRAWL - 30m
11	Set 85	1546	BE	SET		143	49°10.6	123°18.4	96						TRAWL-SURFACE
11	Set 86	1645	BE	SET		144	49°13.6	123°17.8	84						TRAWL - 15m
	↓	1734	BE	NET		145	49°16.334	123°17.558	37	25					BONGO
	↓		BE	CTD		146	49°16.3	123°17.6	39	30		—	MT	—	
11	Set 87	1804	BE	SET		147	49°16.1	123°22.0	230						TRAWL - 15m
11	Set 88	1902	BE	SET		148	49°13.5	123°27.2	290						TRAWL - 45m
	↓	2001	BE	CTD		149	49°14.0	123°30.3	320	250		—	MT	—	
	↓	2022	BE	NET		150	49°14.021	123°30.279	320	150					BONGO

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UN = Up / No stop
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Time Code:
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EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
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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

Month JUNE **Year** 2014 **Ship** F/V VIKING STORM **Cruise ID** 2014-24

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	Set89	2054	BE	SET		151	49°12.0	123°33.1	349						TRAWL - SURFACE
11	Set90	2242	BE	SET		152	49°11.6	123°41.3	327						TRAWL - SURFACE
	END OF CRUISE														

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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: _____

12 JUN 14: Remaining casts downloaded, converted & plotted.
vmain: 17.4V