DAILY SCIENCE LOG BOOK

MISSION NUMBER 2013-14

DATE: From: Sept 25/2013 To:

VESSEL: Vector

PROJECT(S):

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

WaterProperties.ca

Captain: SIMON DOCKERILL First Officer: _____

Second Officer: _____ Third Officer: _____

Fishing Master: _____ Chief Engineer: _____

Mission Participants / Agencies:

_____

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

1st Leg Scientific Personnel: Chief Scientist: PETER CHANDLER

Name		Watch	Cabin	Name	Watch	Cabin
MacLean	H	2	3			
Scozzafava	K	1	2			
Perreault	L	2	2			
Wright	C	2	4			
Loro	F	1	4			
Chandler	P	1	1			

2nd Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. ***Any mid-cruise changes to be noted by watch leader in the notes.***

Data logging computer: _____

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD

Make: SBE model: 9+ serial number: 585

Primary temperature serial number: 4054

Primary conductivity serial number: 3321

Secondary temperature serial number: 4700

Secondary conductivity serial number: 1766

Transmissometer: Wetlabs Model: C-Star s/n: 1185DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 10x s/n: 2356 **P, S or NO pump?**

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

Oxygen sensor: SBE Model: 43 s/n: 1438 **P, S or NO pump?** Note error in S/N should be 0047 G.G.

PAR sensor: BIOSPHERICAL Model: _____ s/n: 4601 **Surface PAR? Y / N**

Other sensors: pH SBE18 s/n: 0692 **P, S or NO pump?**

Other sensors: Surface PAR s/n: 16504 **P, S or NO pump?**

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

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

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

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

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

Oxygen sensor: _____ Model: _____ s/n: _____ **P, S or NO pump?**

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

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

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

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

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

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

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of _____

Month SEP **Year** 2013 **Vessel** VECTOR **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
1	SI	26	01:31	BE	ROS	US	48° 39.11	123° 30.66	185		1 - 9		PC	☑ ☐	Peter Kenning + Francesca
			01:35	BO			° 39.12	° 30.66		100	-	9		☐ ☐	
			01:45	EN			° 39.12	° 30.66			-			☐ ☐	
2	58	26	03:25	BE	ROS	—	48° 42.99	123° 14.27	332		—	—	PC	☑ ☐	
			03:34	BO			° 42.99	° 14.27		331	-			☐ ☐	
			03:40	EN			° 43.00	° 14.26			-			☐ ☐	
3	59	26	04:27	BE	ROS	US	48° 37.67	123° 14.70	218		10 - 23		PC	☑ ☐	
			04:33	BO			° 37.63	° 14.70		215	-	14		☐ ☐	
			04:49	EN			° 37.60	° 14.71			-			☐ ☐	
4	60	26	05:29	BE	ROS	—	48° 33.77	123° 12.81	299		-		PC	☑ ☐	
			05:39	BO			° 33.73	° 12.80		298	—	—		☐ ☐	
			05:44	EN			° 33.71	° 12.81			-			☐ ☐	
5	61	26	06:29	BE	ROS	—	48° 29.14	123° 9.18	285		-		PC	☑ ☐	
			06:37	BO			° 29.12	° 9.16		287	—	—		☐ ☐	
			06:42	EN			° 29.10	° 9.15			-			☐ ☐	
6	76	26	14:24	BG	ROS	—	48° 31.45	124° 29.95	80		—	—	HM	☑ ☐	
			14:26	BG			° 31.44	° 29.84		81	-			☐ ☐	
			14:29	EM			° 31.42	° 29.83			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

- CTD cable reterminated by Hugh 15h00
- depart Port Bay 18h00 local clear, light wind

Cool + calm

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
7	75	26	15:09	BG	ROS	U.S	48° 28.27	124° 32.60	218	216	38 - 51	14	H.M.	☑☐	
			15:13	BO			48° 28.26	124° 32.54			-			☐☐	
			15:31	EN			48° 26.19	124° 32.44			-			☐☐	
8	74	26	16:10	BG	ROS	—	48° 25.04	124° 35.45	190		—		H M.	☑☐	
			16:14	BO			° 25.02	° 35.44		181	-			☐☐	
			16:18	EN			° 25.00	° 35.42			-			☐☐	
9	101	26	17:16	BG	ROS	—	48° 25.46	124° 45.11	240		-		Hm	☑☐	
			17:20	BO			° 25.48	° 45.10		242	-			☐☐	
			17:25	EN			° 25.52	° 45.07			-			☐☐	
10	102	26	18:01	BE	ROS	U.S.	48° 30.00	124° 43.91	255		24 - 37	14	H.M.	☐☐	S.M. OUT OF ORDER
			18:06	BO			° 29.98	° 43.89		255	-			☐☐	SWITCHED STATIONS # 75
			18:23	EN			° 29.92	° 43.77			-			☐☐	AND # 102
11	103	26	19:05	BE	ROS		48° 32.90	124° 42.85	123		-		R	☑☐	chains on
			19:09	BO			° 32.89	° 42.83		117	-			☐☐	botton - 10 m
			19:11	EN			° 32.88	° 42.81			-			☐☐	
12	73	26	22:40	BE	ROS		48° 14.97	124° 6.67	160		-		R	☑☐	chains off
			22:45	BO			° 14.94	° 6.61		159	-			☐☐	botton - 5 m
			22:48	EN			° 14.93	° 6.59			-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

- carpet inner line first - outer line clear sea condition - DGLT improves

- sea condition abate, sunny - clear

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEP | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
13	72	26	23:21	BE	ROS	US	48 ° 18.54	124 ° 4.11	187		52-64		RC	☑ ☐	very choppy
			23:26	BO			° 18.50	° 4.15		185	-	13		☐ ☐	upcast v dramatic
			23:42	~~SE~~			° 18.42	° 4.22			-			☐ ☐	pump prime
			23:46	BO			° 18.40	° 4.23		184	-			☐ ☐	until 2nd cast
			23:49	EN			° 18.39	° 4.23			-			☐ ☐	
14	71	27	01:04	BE	ROS		48 ° 22.11	123 ° 59.39	110		-		RC	☑ ☐	
			01:06	BO			° 22.10	° 59.37		108	-			☐ ☐	
			01:08	EN			° 22.11	° 59.37			-			☐ ☐	
15	70	27	02:30	BE	ROS		48 ° 19.17	123 ° 43.27	150		-		RC	☑ ☐	10°c air temp
			02:34	BO			° 19.19	° 43.29		148	-			☐ ☐	
			02:37	EN			° 19.20	° 43.30			-			☐ ☐	
16	69	27	03:09	BE	ROS	US	48 ° 15.59	123 ° 43.23	177		65-76		RC	☑ ☐	fluorescence zero point
			03:15	BO			° 15.57	° 43.20		175	-	12		☐ ☐	spikey mess ste
			03:27	EN			° 15.61	° 43.19			-			☐ ☐	
17	68	27	03:58	BE	ROS		48 ° 12.20	123 ° 43.05	138		-		RC	☑ ☐	
			04:02	BO			° 12.18	° 43.06		134	-			☐ ☐	
			04:04	EN			° 12.17	° 43.06			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

- downcast very jagged, upcast smooth, oxygen upcast much lower than downcast!
up to 0.5 psu difference in salinity sensors – repeat cast – this time with pump on!

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEP | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
18	105	27	06:04	BE	ROS	—	48° 10.98	123° 18.98	81		—	—	RP	☑ ☐	
			06:07	BO			° 10.98	° 18.98		80	-			☐ ☐	
			06:09	EN			° 10.99	° 18.98			-			☐ ☐	
19	ADCP	27	06:59	BE	ROS	US	48° 14.06	123° 18.15	116		77-86		H.M.	☑ ☐	
			07:02	BO			° 14.07	° 18.18		115	-	10		☐ ☐	
			07:13	EN			° 14.04	° 18.27			-			☐ ☐	
20	104	27	08:02	BE	ROS	—	48° 19.98	123° 18.07	82		—	—	H.M.	☑ ☐	
			08:04	BO			° 20.02	° 18.10		79	-			☐ ☐	
			08:06	EN			° 20.03	° 18.11			-			☐ ☐	
21	67	27	08:35	BE	ROS	—	48° 22.77	123° 18.12	104		—	—	H.M.	☑ ☐	
			08:38	BO			° 22.77	° 18.14		104	-			☐ ☐	
			08:40	EN			° 22.76	° 18.17			-			☐ ☐	
22	66	27	09:17	BE	ROS	—	48° 19.28	123° 14.09	98		—	—	H.M.	☑ ☐	
			09:19	BO			° 19.28	° 14.12		99	-			☐ ☐	
			09:21	EN			° 19.28	° 14.13			-			☐ ☐	
23	65	27	09:59	BE	ROS	U.S	48° 15.87	123° 09.88	124		97-96	10	HM	☐ ☐	
			10:02	BO			° 15.91	° 09.99		124	-			☐ ☐	
			10:12	EN			° 15.83	° 09.96			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
24	64	27	10:47	BE	ROS	—	48° 12.96	123° 06.05	114		-		H.M.	☑ ☐	
			10:50	BO			° 13.01	° 06.10		116	-			☐ ☐	
			10:52	EN			° 13.06	° 06.14			-			☐ ☐	
25	63	27	11:35	BE	ROS	—	48° 14.61	122° 58.58	150		-		H.M.	☑ ☐	
			11:38	BO			° 14.60	° 58.59		151	-			☐ ☐	
			11:41	EN			° 14.60	° 59.00			-			☐ ☐	
26	62	27	12:40	BE	ROS	U.S.	48° 22.76	123° 02.66	146		97 - 107	11	H.M.	☑ ☐	
			12:43	BO			° 22.72	° 02.73		146	-			☐ ☐	
			12:57	EN			° 22.90	° 02.96			-			☐ ☐	
27	54	27	14:33	BE	ROS	—	48° 26.54	122° 44.22	75		-		H.M.	☑ ☐	
			14:35	BO			° 26.53	° 44.21		74	-			☐ ☐	
			14:37	EN			° 26.52	° 44.20			-			☐ ☐	
28	53	27	15:27	BE	ROS	—	48° 33.23	122° 44.36	40		-		HM.	☑ ☐	
			15:29	BO			° 33.23	° 44.36		41	-			☐ ☐	
			15:30	EN			° 33.23	° 44.36			-			☐ ☐	
29	52	27	16:10	BE	ROS	—	48° 38.94	122° 43.39	90		-		H.M.	☑ ☐	
			16:12	BO			° 38.94	° 43.38		92	-			☐ ☐	
			16:14	EN			° 38.95	° 43.37			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
30	51	27	17 :27	BE	ROS	—	48 ° 46 . 70	122 ° 51 . 54	160		—		HM.	☑ ☐	
			17 :31	BO			° 46 . 71	° 51 . 49		162	-			☐ ☐	
			17 :34	EN			° 46 . 72	° 51 . 47			-			☐ ☐	
31	56	27	18 :34	BE	ROS	U.S	48 ° 46 . 39	123 ° 01 . 56	217		108 - 121	14	HM.	☑ ☐	
			18 :39	BO			° 46 . 35	° 01 . 45		225	-			☐ ☐	
			18 :57	EN			° 46 . 18	° 01 . 26			-			☐ ☐	
32	57	27	19 :42	BE	ROS		48 ° 43 . 95	123 ° 08 . 16	163		-		PC	☑ ☐	
			19 :46	BO			° 43 . 93	° 08 . 16		162	-			☐ ☐	- suspend seine
			19 :49	EN			° 43 . 92	° 08 . 15			-			☐ ☐	program
33	46	28	02 :28	BE	ROS	US	48 ° 51 . 43	123 ° 10 . 75	172		122 - 133			☑ ☐	- resume seine
			02 :33	BO			° 51 . 46	° 10 . 63		167	-	12		☐ ☐	program
			02 :47	EN			° 51 . 55	° 10 . 37			-			☐ ☐	
34	44	28	03 :33	BE	ROS		48 ° 56 . 76	123 ° 05 . 93	119		-		PC	☑ ☐	air temp 12 °C
			03 :37	BO			° 56 . 74	° 05 . 91		117	-			☐ ☐	
			03 :39	EN			° 56 . 75	° 05 . 89			-			☐ ☐	
35	45	28	04 :11	BE	ROS		48 ° 53 . 87	123 ° 08 . 28	126		-		PC	☑ ☐	
			04 :15	BO			° 53 . 86	° 08 . 21		125	-			☐ ☐	
			04 :18	EN			° 53 . 85	° 08 . 19			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Scene program suspended @ 12h50, head to Pat Bay for engineering review/repair

- alongside Pat Bay 15h00
- depat Pat Bay 16h30 - proceed thrgt Active Pass to station 46
- recommence Survey at possible station 46 stns 47,48,49 - 50 not sampled 19h30

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEP **Year** 2013 **Vessel** VECTOR **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
36	107	28	05:23	BE	ROS		48° 58.41	123° 18.04	180		-		[illegible]	☑ ☐	
			05:28	BO			° 58.40	° 18.03		179	-			☐ ☐	
			05:31	EN			° 58.40	° 18.00			-			☐ ☐	
37	106	28	06:07	BE	ROS		~~48~~° 00.92	123° 13.12	78		-		[illegible]	☑ ☐	
			06:12	BO			49° 00.88	° 13.10		76	-			☐ ☐	
			06:13	EN			° 00.87	° 13.11			-			☐ ☐	
38	43	28	07:52	BE	ROS	—	49° 00.22	123° 30.01	206		——		N.M.	☑ ☐	
			07:56	BO			° 00.20	° 29.99		207	-			☐ ☐	
			08:00	EN			° 00.20	° 29.97			-			☐ ☐	
39	42	28	08:38	BE	ROS	U.S	49° 01.37	123° 25.47	310		134 - 149	16	N.M	☑ ☐	DIC ROSETTE
			08:45	BO			° 01.34	° 25.43		308	-			☐ ☐	
			09:03	EN			° 01.25	° 25.37			-			☐ ☐	
40	41	28	10:01	BE	ROS	—	49° 03.29	123° 22.32	241		——		N.M	☑ ☐	
			10:06	BO			° 03.29	° 22.32		241	-			☐ ☐	
			10:11	EN			° 03.30	° 22.32			-			☐ ☐	
41	108	28	10:42	BE	ROS	—	49° 04.41	123° 19.14	90		- ——	——	N.M.	☐ ☐	
			10:44	BO			° 04.42	° 19.13		90	-			☐ ☐	
			10:47	EN			° 04.43	° 19.16			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
42	37	28	12:01	BE	ROS	—	49 ° 13.64	123 ° 20.70	212		—		H.M.	☑ ☐	
			12:05	BO			° 13.65	° 20.71		211	-			☐ ☐	
			12:09	EN			° 13.65	° 20.71			-			☐ ☐	
43	38	28	12:46	BE	ROS	—	49 ° 12.04	123 ° 26.43	309		—		H.M.	☑ ☐	
			12:53	BO			° 12.04	° 26.44		304	-			☐ ☐	
			12:58	EN			° 12.05	° 26.44			-			☐ ☐	
44	39	28	13:42	BE	ROS	U.S.	49 ° 09.83	123 ° 32.92	373		150 - 166	17	H.M	☑ ☐	SURFACE PHYTO
			13:50	BO			° 09.87	° 32.89		369	-			☐ ☐	SAMPLE
			14:11	EN			° 09.97	° 32.60			-			☐ ☐	
45	40	28	15:07	BE	ROS	—	49 ° 08.60	123 ° 36.73	148		—		H.M.	☑ ☐	
			15:10	BO			° 08.61	° 36.73		142	-			☐ ☐	
			15:13	EN			° 08.62	° 36.73			-			☐ ☐	
46	GEO 1	28	16:14	BE	NET	—	49 ° 14.21	123 ° 45.36			—		H.M.	☐ ☐	SCORE NET
			16:25	BO			49 ° 14.22	123 ° 45.27			-			☐ ☐	
			16:32	EN			49 ° 14.20	123 ° 45.29			-			☐ ☐	
47	26	28	17:06	BE	ROS	—	49 ° 14.31	123 ° 50.75	249		—		H.M	☑ ☐	
			17:10	BO			° 14.31	° 50.75		257	-			☐ ☐	
			17:15	EN			° 14.30	° 50.70			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
48	27	28	18:05	BE	ROS	U.S.	49° 19 . 12	123° 47 . 94	350		167 - 182	16	H.M.	☑ ☐	
			18:11	BO			49° 19 . 12	123° 47 . 89		341	-			☐ ☐	
			18:30	EN			49° 19 . 09	123° 47 . 82			-			☐ ☐	
49	CPF1	28	19:57	BE	NET		49° 22 . 14	124° 05 . 14	250		-		PC	☐ ☐	
			19:59	BO			° 22 . 14	° 05 . 15		50	-			☐ ☐	
			20:00	EN			° 22 . 14	° 05 . 15			-			☐ ☐	
50	CPF1	28	20:09	BE	NET		49° 22 . 15	124° 05 . 14	250		-		PC	☐ ☐	
			20:18	BO			° 22 . 12	° 05 . 11		240	-			☐ ☐	
			20:22	EN			° 22 . 11	° 05 . 10			-			☐ ☐	
51	6	28	22:34	BE	ROS	US	49° 30 . 60	124° 27 . 80	192		-		PC	☑ ☐	chains on
			22:38	BO			° 30 . 61	° 27 . 81		185	-			☐ ☐	bottom - 10
			22:53	EN			° 30 . 65	° 27 . 88			-			☐ ☐	
52	7	28	23:34	BE	ROS		49° 34 . 35	124° 24 . 10	352		-		PC	☑ ☐	chains off
			23:41	BO			° 34 . 35	° 24 . 13		350	-			☐ ☐	bottom - 5
			23:47	EN			° 34 . 35	° 24 . 19			-			☐ ☐	
53	8	29	00:46	BE	ROS		49° 39 . 29	124° 32 . 98	338		-		PC	☑ ☐	
			00:54	BO			° 39 . 24	° 32 . 98		335	-			☐ ☐	
			01:00	EN			° 39 . 23	° 32 . 98			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

This page is for any notes or observations

seastate building 25-35 knts from southeast

at rosette 27 turn stern to wind & run down to ~~not~~ CP1

in the rosette centreline stations 2, 3, 6, abandon ctd stations 28, 24, 25, 1, 4 to avoid transiting broad side to seas

- 13h30 local - seastate beyond safe working conditions, suspend sampling
  - steam north/northwest to within SoG;
- 14h45 local - try cast @ station 3 - remains too rough for rosette
- 15h30 local - resume sampling at station 6

- lost alternator signal from buoy at station 7

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEP | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information: Latitude	Positional Information: Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
54	9	29	01:38	BE	ROS	US	49° 35.51	124° 38.27	169		196-207		PC	☑ ☐	
			01:42	BO			° 35.49	° 38.25		165	-	12		☐ ☐	
			01:53	EN			° 35.43	° 38.22			-			☐ ☐	
55	10	29	02:54	BE	ROS		49° 40.69	124° 47.29	90		-		PC	☑ ☐	
			02:57	BO			° 40.67	° 47.30		89	-			☐ ☐	
			02:58	EN			° 40.67	° 47.31			-			☐ ☐	
56	11	29	03:25	BE	ROS		49° 42.38	124° 43.59	292		-		PC	☑ ☐	
			03:31	BO			° 42.36	° 43.72		285	-			☐ ☐	
			03:36	EN			° 42.34	° 43.81			-			☐ ☐	
57	12	29	04:01	BE	ROS	US	49° 43.59	124° 40.98	354		208-223		PC	☑ ☐	11°C air temp
			04:09	BO			° 43.57	° 41.10		349	-	16		☐ ☐	
			04:27	EN			° 43.56	° 41.33			-			☐ ☐	
58	13	29	05:59	BE	ROS		49° 55.31	124° 55.28	231		-		PC	☑ ☐	
			06:04	BO			° 55.30	° 55.33		230	-			☐ ☐	
			06:08	EN			° 55.30	° 55.36			-			☐ ☐	
59	14	29	07:07	BE	ROS	US	49° 52.94	124° 59.64	315		224-238		H.M.	☑ ☐	
			07:14	BO			49° 52.96	124° 59.63		312	-	15		☐ ☐	
			07:32	EN			49° 52.99	124° 59.55			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
60	15	29	08:17	BE	ROS	—	49° 51.57	125° 01.57	126		—	—	H.M.	☑ ☐	
			08:19	BO			° 51.56	° 01.55		125	-			☐ ☐	
			08:22	EN			° 51.55	° 01.54			-			☐ ☐	
61	16	29	09:22	BE	ROS	U.S.	49° 57.65	125° 08.75	156		239 - 249	11	H.M.	☑ ☐	
			09:26	BO			° 57.62	° 08.73		154	-			☐ ☐	
			09:38	EN			° 57.59	° 08.91			-			☐ ☐	
62	17	29	10:28	BE	ROS	—	49° 58.85	125° 04.28	263		—		H.M	☑ ☐	
			10:34	BO			° 58.83	° 04.25		259	-			☐ ☐	
			10:38	EN			° 58.78	° 04.19			-			☐ ☐	
63	18	29	11:13	BE	ROS	—	49° 59.21	124° 58.95	146		—	—	H.M	☑ ☐	
			11:17	BO			° 59.22	° 58.92		144	-			☐ ☐	
			11:19	EN			° 59.23	° 58.91			-			☐ ☐	
64	19	29	12:07	BE	ROS	—	50° 01.24	124° 52.91	284		—	—	H.M	☑ ☐	
			12:12	BO			° 01.21	° 52.86		273	-			☐ ☐	
			12:18	EN			° 01.20	° 52.83			-			☐ ☐	
65	SOGN-2	29	17:20	—	MOR		49° 50.153	124° 52.227	334		-			☐ ☐	grab drop
66	20	29	19:12		ROS		49° 47.22	124° 32.38	316		-		RC	☑ ☐	
			19:19				° 47.19	° 32.41		316	-			☐ ☐	
			19:24				° 47.18	° 32.39			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

52248

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 12 of _____

Month SEP **Year** 2013 **Vessel** VECTOR **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
67	22	30	14:06	BG	ROS	—	49° 40.24	124° 16.31	353		- — —		H.M.	☑ ☐	
			14:14	BO			° 40.24	° 16.40		351	-			☐ ☐	
			14:20	EN			° 40.22	° 16.42			-			☐ ☐	
68	NET22	30	14:28	BG	NET	—	49° 40.23	124° 16.52	353		- — —		H.M.	☐ ☐	SCORE NET
			14:30	BO			49° 40.23	124° 16.54		50	-			☐ ☐	
			14:31	EN			49° 40.23	124° 16.54			-			☐ ☐	
69	NET 22	30	14:35	BG	NET		49° 40.22	124° 16.55	353		- — —		H.M.	☐ ☐	DEEP SCORE NET
			14:44	BO			49° 40.23	124° 16.59		340	-			☐ ☐	
			14:49	EN			49° 40.26	124° 16.60			-			☐ ☐	
70	24	30	16:32	BG	ROS	—	49° 30.33	124° 06.03	425		- — —		H.M.	☑ ☐	
			16:40	BO			° 30.32	° 06.01		422	-			☐ ☐	
			16:48	EN			° 30.32	° 06.02			-			☐ ☐	
71	25	30	17:12	BE	ROS	—	49° 27.72	124° 07.42	289		- — —		H.M.	☑ ☐	
			17:19	BO			° 27.73	° 07.51		282	-			☐ ☐	
			17:24	EN			° 27.72	° 07.54			-			☐ ☐	
72	2	30	17:54	BE	ROS	U S	49° 24.10	124° 09.25	275		250 - 264	15	H.M.	☑ ☐	
			18:00	BO			° 24.08	° 09.25		273	-			☐ ☐	
			18:17	EN			° 24.06	° 09.25			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 14 February 2013

13h30 - ship diverted to respond to RCC call out, small vessel empty Pender Hbr to Quathiaski Cove

14h00 - SAR resolved - head to Jervis to wait out weather

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2013 | **Vessel** VECTOR | **Cruise ID** 2013-14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
73	1	30	18:55	BE	ROS	–	49° 20.27	124° 12.02	244		———		H M	☑ ☐	
			18:58	BO			° 20.27	° 11.99		242	-			☐ ☐	
			19:02	EN			° 20.27	° 12.02			-			☐ ☐	
74	4	30	19:57	BE	ROS	–	49° 24.53	124° 22.02	347		-		RC	☑ ☐	
			20:04	BO			° 24.56	° 22.02		345	-			☐ ☐	
			20:10	EN			° 24.60	° 22.03			-			☐ ☐	
75	3	30	20:36	BE	ROS	US	49° 26.63	124° 20.25	320		-		RC	☑ ☐	
			20:42	BO			° 26.66	° 20.26		318	-			☐ ☐	
			20:58	EN			° 26.68	° 30.30			-			☐ ☐	
76	5	30	21:48	BE	ROS	–	49° 27.33	124° 30.76	315		-		RC	☑ ☐	11°C air temp.
			21:56	BO			° 27.30	° 30.74		314	-			☐ ☐	
			22:01	EN			° 27.28	° 30.70			-			☐ ☐	
77	CPF2	30	23:16	BE	NET		49° 27.95	124° 30.04	330		-		KS	☐ ☐	
			23:17	BO			° 27.94	° 30.04		50	-			☐ ☐	
			23:18	EN			° 27.94	° 30.04			-			☐ ☐	
78	CPF2	30	23:25	BE	NET		49° 27.92	124° 30.11	330		-		KS	☐ ☐	
			23:31	BO			° 27.91	° 30.12		320	-			☐ ☐	
			23:37	EN			° 27.92	° 30.12			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

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

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Nosette equations complète

net complete, scène ops complete