DAILY SCIENCE LOG BOOK

MISSION NUMBER 2012-05

DATE: From: June 13/2012 to: June /2012

VESSEL: CCGS VECTOR

PROJECT(S): STRAIT OF GEORGIA / JUAN DE FUCA STRAIT WATER PROPERTIES SURVEY

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

WaterProperties.ca

Captain: JEFF NAVRANA
First Officer: TONY MACQUIRE
Second Officer:
Third Officer: STEVE SWIFT
Fishing Master:

Mission Participants / Agencies:

Scientific Personnel: Chief Scientist: PETER CHANDLER

Name	Watch	Cabin	Name	Watch	Cabin
PETER CHANDLER					
SCOTT ROSE					
KENNY SCOZZAFAVA					
GLENN COOPER					
TYSON CARSWELL					
GENEVIEVE BEDARD					
MELISSA HENNEKES					

Second leg of Mission: Chief Scientist:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: #2
Data acquisition program: SEASAVE
CTD deck unit make: SBE model: 11+ serial number: 0425

Primary CTD
Make: SBE model: 9+ serial number: 0550
Primary temperature serial number: 2374
Primary conductivity serial number: 3396
Secondary temperature serial number: 2668
Secondary conductivity serial number: 2754
Transmissometer: Wetlabs Model: C-Star s/n: 1185DR
Fluorometer: Model Seapoint Cable gain: 3x s/n: 2356 (P) S or NO pump?
Oxygen sensor: SBE Model: 43 s/n: [redacted]1176 P, (S) or NO pump?
PAR sensor: BIOSPHERICAL Model: QSP-200 LS s/n: 4601
Other sensors: ECO Fluorometer, Wet labs s/n: 2215 P, S or (NO) pump?
Other sensors: pH SBE 18 s/n: 0692 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:
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):

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

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
13	SI	2246	BE	ROS	US	1	48 39.06	123 30.64	184	100	1-9	9	SR/RC	✓	
		2250	BO				39.06	30.66							
		2259	EN				39.05	30.70							
14	59	0042	BE	ROS	US	2	48 37.78	123 14.60	230		10-23	14	RC	✓	
		0050	BO				37.79	14.61		225					
		0105	EN				37.80	14.58							
14	61	0204	BE	CTD		3	48 29.18	123 9.20	285				RC	✓	
		0212	BO				29.09	9.12		280					
		0218	EN				29.05	9.03							
14	60	0303	BE	CTD		4	48 33.89	123 12.79	292				RC	✓	
		0312	BO				33.89	12.78		289					
		0318	EN				33.90	12.83							
14	58	0424	BE	CTD		5	48 42.99	123 14.33	336				RC	✓	
		0432	BO				43.05	14.42		338					
		0437	EN				43.07	14.43							
14	57	0510	BE	CTD		6	48 44.02	123 8.13	152				RC	✓	
		0515	BO				44.06	8.11		151					
		0518	EN				44.09	8.10							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

This page is for any notes or observations

Depart Pat Bay 15h05 13 June 2012 - slight ripples, overcast

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	56	0556	BE	ROS	US	7	48 46.47	123 1.68	192		24 - 37	14	RC	✓	drift during cast
		0601	BO				46.54	1.69		185					from 205 → 183 m
		0615	EN				46.77	1.84							
	22	1402	BE	ROS		8	49 40.21	124 16.33	352		—		SR	✓	
		1409	BO				40.21	16.33		347					
		1416	EN				40.21	16.32							
	22	1432	BE	NET		9	49 40.22	124 16.30	352		—		SR		
		1436	BO				40.21	16.30		50					
		1440	EN				40.21	16.30							
	22	1442	BE	NET		10	49 40.21	124 16.30	352		—		SR		
		1452	BO				49 40.22	16.29							
		1459	EN				40.21	16 27							
	20	1624	BE			11	49 47.18	124 32.26	309		—		SR	✓	Sal drops @~220m
		1630	BO				47.19	32.29							
		1635	EN				47.20	32.30							
	13	1832	BE			12	49 55.30	124 55.18	236		—		SR	✓	
		1836	BO				55.30	55.18		230					
		1840	EN				55.30	55.19							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012 - 05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	14	1911	BE	ROS	US	13	49 53.02	124 59.59	315		38 - 52	15	RC	✓	bottle 17 did not fire
		1917	BO				53.03	59.60		309					
		1934	EN				53.12	59.67							
14	15	2028	BE	CTD		14	49 51.62	125 1.62	128				RC	✓	
		2031	BO				51.63	1.61		123					
		2033	EN				51.64	1.60							
14	16	2129	BE	ROS	US	15	49 57.70	125 8.80	155		53 - 63	11	RC	✓	
		2131	BO				57.70	8.78							
		2142	EN				57.69	8.72							
14	19	22:56	BE	CTD		16	50' 1.22	124' 52.92	282						
		23:01	BO				50' 1.214	124' 52.892		275			GB	✓	
		23:06	EN				50' 1.214	124' 52.89							
14	18	23:39	BE	CTD		17	49' 59.23	124' 58.87	143					✓	
		23:43	BO				49' 59.26	124' 58.88		136			T.C		
		23:46	EN				49' 59.26	124' 58.86							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** 2012 **Ship** Vector **Cruise ID** 2012 – 05

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
15	17	00:12	BE	CTD		18	49' 58.826	125' 4.297	264				GB	✓	
		00:18	BO				49' 58.82	125' 4.31		260					
		00:23	EN				49' 58.816	125' 4.322							
15	10	02 36	BE	CTD		19	49 40.72	124 47.21	99				PC	✓	
		02 40	BO				40.73	47.26		98					
		02 41	EN				40.73	47.25							
15	11	0304	BE	CTD		20	49 42.40	124 43.48	301				PC	✓	continued unusual
		0311	BO				42.42	43.44		296					in variation in
		0316	EN				42.44	43.42							fluorescence values
15	11	03 29	BE	NET		21	49 42.50	124 43.40	304				GC		50 – 0 m
		0331	BO				42.50	43.40		50					
		0333	EN				42.50	43.40							
15	11	0338	BE	NET		22	49 42.53	124 43.36	307				KS		300 – 0 m
		03 49	BO				42.58	43.31		300					
		0356	EN				42.61	43.31							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

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
15	12	0410	BE	ROS	US	23	49 43.59	124 40.81	356		64-79	16	RC	✓	2 killer whales
		0418	BO				43.62	40.84		351					
		0435	EN				43.64	40.86							
15	8	0533	BE	CTD		24	49 39.35	124 33.04	340				RC	✓	
		0536	BO				39.38	33.05		334					
		0542	EN				39.40	33.07							
15	9	0626	BE	ROS	US	25	49 35.53	124 38.31	170		80-91	12	RC	✓	no oxygens
		0629	BO				35.51	38.31		165					
		0641	EN				35.45	38.29							
15	7	0758	BE	ROS		26	49 34.41	124 24.25	352				SR	✓	
		0804	BO				34.41	24.23		345					
		0810	EN				34.40	24.22							
15	6	0847	BE	ROS		27	49 30.61	124 27.79	194		92-104	13	SR	✓	
		0851	BO				30.62	27.76		189					
		0904	EN				30.60	27.67							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** 2012 **Ship** **Cruise ID**

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
15	CPF2	0940	BE	ROS		28	49° 27.98	124° 30.00	326				SR	✓	
		0946	BO				27.99	30.01		320					
		0952	EN				28.00	30.01							
15	CPF2		BE	NET		29	49° 27.97	124° 29.97	328	50			SR		
~~15~~	~~CPF2~~		BO				49° 27.98	124° 29.97	328				SR		
			EN				49° 27.98	124° 29.97							
15	CPF2		BE	NET		30	49° 27.97	124° 29.97	328	320					
			BO				49° 27.98	124° 29.97							
			EN				49° 27.98	124° 29.98							
15	5	1059	BE	ROS		31	49 27.39	124° 30.81	316				SR	✓	
		1104	BO				27.39	30.82		311					
		1109	EN				27.39	30.80							
15	4	1158	BE	ROS		32	49 24.53	124 22.06	347				SR	✓	
		1205	BO				24.53	22.06		342					
		1210	EN				24.53	22.06							
15	3	1232	BE	ROS		33	49 26.61	124 20.23	324		105-120		SR	✓	
		1238	BO				26.60	20.21		319					
		1255	EN				26.62	20.19							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** 2012 **Ship** Vector **Cruise ID** 2012-05

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
15	1	1353	BE			34	49 20.31	124 12.09					SR	✓	
		1357	BO				20.30	12.09							
		1401	EN				20.29	12.09							
15	CFP1	1440	BE	SCORE NET		35	49° 22.02	124 05.14	244	50			MH		
		1442	BO				22.07	05.13							
		1445	EN				22.02	05.13							
15	CFP1	1451	BE	SCORE NET		36	49° 22.02	124° 05.12	244	238			MH		
		1459	BO				22.00	05.11							
		1407	EN				22.00	05.12							
15	2	1537	BE	ROS		37	49 24.11	124 9.33	279		121-135		SR	✓	
		1542	BO				24.10	9.31							
		1559	EN				24.10	9.30							
15	25	1634	BE	ROS		38	49 27.69	124 7.50	291				SR	✓	
		1640	BO				27.70	7.50		286					
		1644	EN				27.70	7.50							
15	24	1711	BE	ROS		39	49 30.32	124 6.02	425				SR	✓	
		1719	BO				30.31	6.01		419					
		1726	EN				30.31	6.01							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05 Page _____ of _____

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
15	28	1915	BE	CTD		40	49 24.09	123 45.31	136				RC	✓	
		1918	BO				24.10	45.31		129					
		1921	EN				24.11	45.31							
15	27	2006	BE	ROS	US	41	49 19.15	123 48.10	350		136-151		RC	✓	? #11 snap
		2012	BO				19.17	48.12		342					out of water?
		2030	EN				19.21	48.12							
15	26	2119	BE	CTD		42	49 14.32	123 50.83	254				RC	✓	snap all bottles
		2126	BO				14.33	50.87		249					at surface - all good
		2130	EN				14.33	50.84							
15	GEO 1	2207	BE	NET		43	49 15.03	123 44.92	403				GC/KS		good shape to net
		2208	BO				15.03	44.92		50					50-0 m
		2210	EN				15.04	44.92							jelly fish in net
15	GEO 1	2216	BE	NET		44	49 15.03	123 44.90	403						399-0 m
		2230	BO				15.08	44.92		395					some twist to net
		2237	EN				15.10	44.93							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

bottles 7 & 8 snapped @ 125 m
question whether bottle 11 snapped at depth (75 m) or at surface when being brought onboard. — NO WATER IN BOT 11

- all bottles snapped well, all vents holding

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

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
15	40	2341	BE	CTD		45	49 8.63	123 36.80	145				RC	✓	
		2344	BO				8.70	36.80		138					
		2347	EN				8.74	36.80							
16	39	0015	BE	ROS	US	46	49 9.79	123 32.97	376		152 - 168	17	RC	✓	bottle 11 did not fire
		0021	BO				9.86	32.98		371					
		0040	EN				9.87	32.99							
16	38	0118	BE	CTD		47	49 11.99	123 26.42	309				RC	✓	
		0123	BO				11.99	26.40		304					
		0128	EN				11.99	26.37							
16	37	0159	BE	CTD		48	49 13.59	123 20.68	213				RC	✓	
		0203	BO				13.58	20.68		208					
		0206	EN				13.58	20.69							
16	108	0314	BE	CTD		49	49 4.38	123 19.14	99				RC	✓	
		0316	BO				4.36	19.23		94					
		0317	EN				4.37	19.30							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
15	41	0338	BE	CTD		50	49 3.27	123 22.36	247				RC	✓	
		0343	BO				3.30	22.44		243					
		0346	EN				3.31	22.54							
15	42	0408	BE	ROS	US	51	49 1.77	123 26.22	322		169-185	17	RC	✓	
		0415	BO				1.77	26.32		317					
			EN												
15	42	0507	BE	NET		52	49 1.79	123 26.27	320				GC/KS		50 → 0
		0509	BO				1.80	26.28		50					descend 0.5 ms⁻¹
		0510	EN				1.81	26.31							recover 1.0 ms⁻¹
15	42	0516	BE	NET		53	49 1.80	123 26.43	320				GC/KS		312 → 0
		0527	BO				1.79	26.55		312					312 m of wire out
		0532	EN				1.78	26.60							
15	43	0602	BE	CTD		54	49 0.17	123 30.13	190				RC	✓	12.7°C air temp
		0605	BO				0.17	30.15		185					
		0608	EN				0.17	30.17							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012.05

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
15	106	0728	BE	ROS		55	49 1.00	123 13.26	77				SR		
		0730	BO				1.00	13.27		72					
		0731	EN				1.00	13.29							
16	107	0812	BE	ROS		56	48 58 41	123 18.01	181						
		0815	BO				58.42	18.01		177			SR	✓	
		0818	EN				58.42	18.01							
16	46	0924	BE	ROS	US	57	48 51.38	123 10.74	178		186-197		SR	✓	
		0927	BO				51.37	10.70		172					
		0939	EN				51.31	10.51							
16	45	1026	BE			58	48 53.86	123 8.39	129				SR	✓	
		1029	BO				53.83	8.39		124					
		1031	EN				53.83	8.40							
16	44	1109	BE			59	48 56.77	123 6.02	119				SR	✓	
		1111	BO				56.76	6.02							
		1113	EN				56.75	6.01							
16	49	1150	BE				48 54.99	122 59.55	130				SR	✓	
		1153	BO				54.98	59.55		126					
		1155	EN				54.98	59.54							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** 2012 **Ship** Vector **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	48	1233	BE	ROS		61	48 51.69	123 3.12	223				SR	✓	
		1237	BO				51.65	3.06							
		1240	EN				51.63	3.04							
16	47	1309	BE	ROS		62	48 49.31	123 6.18	185				SR	✓	
		1313	BO				49.31	6.17		180					
		1315	EN				49.30	6.17							
16	101	2345	BE	ROS		63	48 25.33	124 45.12	235				RC	✓	depth deeper than
		2348	BO				25.36	45.02		225					on station file
		2351	EN				25.41	44.92							stop 10 m off bottom
17	102	0043	BE	ROS	US	64	48 30.03	124 44.12	254		198-211	14	RC	✓	chains still on
		0048	BO				30.09	44.32		245					
		0103	EN				30.19	44.72							
17	103	0200	BE	ROS		65	48 33.03	124 43.12	120				RC		chains on
		0202	BO				33.06	43.16		110					
		0204	EN				33.08	43.19							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

This page is for any notes or observations

weights on - bottom -10

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	76	0314	BE	ROS		66	48 31.37	124 30.06	90				RC	✓	weights on
		0316	BO				31.39	30.07		82					
		0317	EN				31.40	30.07							
17	75	0353	BE	ROS	US	67	48 28.29	124 32.88	220		212-225	14	RC	✓	weights on
		0357	BO				28.34	32.94		210					
		0410	EN				28.48	33.06							
17	74	0455	BE	ROS		68	48 25.11	124 35.65	188				RC	✓	weights on
		0458	BO				25.11	35.75		176					
		0501	EN				25.10	35.78							
17	73	0729	BE	ROS		69	48 14.97	124 6.82	162				SR	✓	weight off
		0732	BO				14.94	6.84		157					
		0735	EN				14.92	6.86							
17	72	0814	BE			70	48 18.56	124 4.10	187		226-238		SR	✓	
		0818	BO				18.52	4.14							
		0826	EN				18.50	4.16							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** **Ship** **Cruise ID**

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	71	0918	BE	ROS		71	48 22.21	123 59.44	108				SR	✓	
		0920	BO				22.21	59.45		105					
		0922	EN				22.21	59.45							
17	70	1036	BE	ROS		72	48 19.19	123 43.21	150				SR	✓	
		1039	BO				19.19	43.23		143					
		1042	EN				19.19	43.24							
17	69	1144	BE	ROS	US	73	48 15.61	123 43.42	177		239-250		SR	✓	pH probe cap
		1147	BO				15.65	43.52		172					left on
			EN				15.77	43.96							
17	68	1232	BE	ROS		74	48 12.26	123 43.42	138				SR		
		1234	BO				12.30	43.60		133					
		1237	EN				12.34	43.76							
17	105	1504	BE	ROS		75	48 11.02	123 19.14	84				SR	✓	
		1506	BO				11.02	19.25		80					
		1508	EN				11.02	19.32							
17	ADCP	1541	BE	ROS		76	48 14.04	123 18.14					SR	✓	
		1544	BO				14.03	18.25							
		1551	EN				13.97	18.68							

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: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month June **Year** 2012 **Ship** Vector **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	104	1640	BE			77	48 19.98	123 18.16	86				SR	✓	
		1642	BO				19.95	18.24		80					
		1644	EN				19.92	18.31							
17	67	1713	BE	ROS		78	48 22.80	123 17.99	105				SR	✓	
~~17~~	~~67~~	1715	BO				22.78	17.98							
		1717	EN				22.75	17.92							
17	66	1748	BE	ROS		79	48 19.07	123 14.29	105				SR	✓	
		1752	BO				18.98	14.45							
		1757	EN				19.98	14.45							
17	65	1836	BE	ROS	US	80	48 15.85	123 9.75	123				SR	✓	
		1839	BO				15.85	9.76		119					
		1850	EN				15.85	9.73							
17	64	1929	BE	ROS		81	48 12.78	123 5.97	110				R	✓	weights on
		1930	BO				12.78	5.97		101					
		1932	EN				12.78	5.97							
17	63	2014	BE	ROS		82	48 14.57	122 58.47	151				R	✓	weights on
		2016	BO				14.56	58.40		142					
		2018	EN				14.57	58.35							

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page _____ of _____

Month JUNE **Year** 2012 **Ship** VECTOR **Cruise ID** 2012-05

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	62	2135	BE	ROS	US	83	48 22.81	123 2.53	146		270-280	11	RC	✓	weights on
		2138	BO				22.80	2.47		137					
		2148	EN				22.80	2.36							
17	54	2308	BE	ROS		84	48 26.64	122 44.43	78				RC	✓	weights on
		2309	BO				26.68	44.42		70					strong tide
		2310	EN				26.71	44.40							
17	53	2349	BE	ROS		85	48 33.38	122 44.83	57				RC	✓	weights off
		2351	BO				33.34	44.81		55					
		2351	EN				33.38	44.81							
18	52	0026	BE	ROS		86	48 38.93	122 43.24	85				RC	✓	
		0028	BO				38.94	43.21		80					
		0029	EN				38.97	43.17							
18	51	0133	BE	ROS		87	48 46.66	122 51.59	160				RC	✓	
		0136	BO				46.67	51.59		157					DONE
		0139	EN				46.68	51.58							

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: 06 March 2008