

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-64

DATE:

From: 21 JUN 2017

To: 27 JUN 2017

VESSEL:

CCGS VECTOR

PROJECT(S):

STRAIT OF GEORGIA / JUAN DE FUCA
WATER PROPERTIES SURVEY

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

WaterProperties.ca

Captain: Zubby Chmura First Officer: Shane Kardana

Second Officer: Can Third Officer: _____

Fishing Master: Mike Pethe Chief Engineer: Tim

Mission Participants / Agencies:

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

1st Leg Scientific Personnel: Chief Scientist: Peter Chandler

2nd Leg Scientific Personnel: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JUNE</u>			Year <u>2017</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2017-64</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
001	SI	22	01:40	BE	ROS	US	48° 39.11	123° 30.03	180		1 - 9		R/ER	☒	
			01:50	BO			° 39.11	° 30.01		100	-			☐	
			02:01	EN			° 39.11	° 29.99			-			☐	
			:				°	°			-			☐	
002	58	22	03:30	BE	ROS		48° 42.99	123° 14.30	328		-			☒	brd depth 335
			03:39	BO			° 43.00	° 14.31		331	-			☐	sound dpt 333
			03:44	EN			° 43.01	° 14.28			-			☐	adul dpt 336
			:				°	°			-			☐	
003	59	22	04:27	BE	NET		48° 37.80	123° 14.62	229		-			☐	slp 229 227 south
			04:36	BO			° 37.79	° 14.57		217	-			☐	descend 1/2 mi
			04:40	EN			° 37.80	° 14.57			-			☐	raise 1 mi
			:				°	°			-			☐	
004	59	22	04:53	BE	ROS	US	48° 37.80	123° 14.60	229		10 - 25			☒	
			05:00	BO			° 37.80	° 14.60		225	-			☐	230 adul dpt
			05:16	EN			° 37.79	° 14.59			-			☐	
			:				°	°			-			☐	
005	60	22	05:55	BE	ROS		48° 33.89	123° 12.79	291		-			☒	
			06:03	BO			° 33.88	° 12.70		286	-			☐	
			06:08	EN			° 33.87	° 12.65			-			☐	

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)
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DN = Down / No stop

Notes:

Time Code:

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

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- bottle 15 did not fire - took particulate water from bottle 16

- labels fading in lot, adjust printer settings to 'bond paper', 'improved toner fixing'

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JUNE</u>			Year <u>2017</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2017-64</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
006	61	22	06:48	BE	ROS		48° 29.23	123° 9.23	284		-		RE	☒	
			06:53	BO			° 29.23	° 9.22		283	-			☐	+ 4.7 altimeter
			06:58	EN			° 29.24	° 9.22			-			☐	
			:				°	°			-			☐	
007	102	22	17:13	BE	ROS	US	48° 30.02	124° 44.04	252		26-40	15		☐	Tripped 16 as
			17:17	BO			° 30.05	° 44.12		245	-			☐	15 may have
			17:38	EN			° 30.04	° 43.89			-			☐	firing issues
			:				°	°			-			☐	
008	103	22	18:33	BE	ROS		48° 33.02	124° 42.93	122		-			☒	Rough seas
			18:36	BO			° 33.01	° 42.94		113	-			☐	
			18:38	EN			° 33.02	° 42.97			-			☐	
			:				°	°			-			☐	
009	76	22	20:19	BE	ROS		48° 31.38	124° 29.96	87		-		RE	☒	chains still
			20:21	BO			° 31.38	° 29.97		82	-			☐	check beeper file
			20:22	EN			° 31.38	° 29.97			-			☐	station
			:				°	°			-			☐	
010	75	22	20:57	BE	ROS	US	48° 28.18	124° 32.77	220		41-55		RE	☒	
			21:03	BO			° 28.18	° 32.78		214	-	16		☐	bottle 15 did not
			21:20	EN			° 28.18	° 32.82			-			☐	fire

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- missed station 101 as conditions were too rough to safely deploy/recover the rosette
- consider (in future) the use of an internally recording Seabird CTD when conditions prohibit use of rosette

on for training purposes

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Month <u>JUNE</u>				Year <u>2017</u>		Vessel <u>VECTOR</u>				Cruise ID <u>2017-64</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
011	74	22	22:13	BE	ROS		48° 25.09	124° 35.62	185		-		RE	☒ ☐	chains on
			22:16	BO			° 25.09	° 35.66		175	-			☐ ☐	
			22:19	EN			° 25.09	° 35.68			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
012	73	23	00:49	BE	ROS		48° 15.00	124° 6.65	160		-		RE	☒ ☐	chains off
			00:52	BO			° 15.05	° 6.63		158	-			☐ ☐	5 m on alt
			00:55	EN			° 15.07	° 6.63			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
013	72	23	01:29	BE	NET		48° 18.61	124° 04.01	186		-		RIP	☐ ☐	
			01:35	BO			° 18.64	° 04.05			-			☐ ☐	
			01:55	EN			° 18.67	° 04.07			-			☐ ☐	60
			:				° .	° .			-			☐ ☐	50
014	72	23	01:50	BE	ROS	US	48° 18.64	124° 04.02	186		56 - 69	14		☒ ☐	111
			01:54	BO			° 18.61	° 03.99		182	-			☐ ☐	106
			02:08	EN			° 18.45	° 04.04			-			☐ ☐	+5
			:				° .	° .			-			☐ ☐	
015	71	23	02:50	BE	ROS		48° 22.20	123° 59.37	108		-			☒ ☐	add 4m to
			02:52	BO			° 22.19	° 59.44		105	-			☐ ☐	depth sensor
			02:54	EN			° 22.19	° 59.46			-			☐ ☐	

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Notes:

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labels still fading - switch ^{printer} ↑ setting to 'labels'

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Month <u>JUNE</u>			Year <u>2017</u>			Vessel <u>VECTOR</u>			Cruise ID <u>2017-64</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
016	70	23	04:17	BE	ROS		48° 19.24	123° 43.22	148		-		<i>PC</i>	☒ ☐	air temp 11.5°C
			04:20	BO			° 19.24	° 43.21		143	-			☐ ☐	
			04:23	EN			° 19.25	° 43.20			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
017	69	23	04:53	BE	ROS	US	48° 15.58	123° 43.19	177		70-82	13		☒ ☐	
			04:56	BO			° 15.59	° 43.26		174	-			☐ ☐	
			05:10	EN			° 15.59	° 43.21			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
018	68	23	05:37	BE	ROS		48° 12.18	123° 42.98	140		-			☒ ☐	Sounder +3
			05:41	BO			° 12.20	° 43.02		135	-			☐ ☐	
			05:43	EN			° 12.21	° 43.00			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
019	105	23	07:31	BE	ROS		48° 11.08	123° 19.03	94		 			☒ ☐	
			07:32	BO			° 11.06	° 19.03		90	-			☐ ☐	
			07:34	EN			° 11.06	° 19.03			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
020	ADCP	23	08:00	BE	ROS	US	48° 13.97	123° 18.02	123		83-93	11		☒ ☐	
			08:03	BO			° 13.97	° 18.03		118	-			☐ ☐	
			08:20	EN			° 13.87	° 17.72			-			☐ ☐	

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Notes:

fluorescence spiking (2x) on upcast

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Month <u>June</u>				Year <u>2017</u>			Vessel <u>Vector</u>				Cruise ID <u>2017-64</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
021	104	23	09:09	BE	ROS		48° 20.00	123° 17.99	85		-	-	SR	☒	Conductivity spikes
			09:10	BO			° 20.00	° 17.99			-			☐	possibly plumbing
			09:12	EN			° 20.00	° 17.99			-			☐	blockage.
022	67	23	09:35	BE	ROS		48° 22.80	123° 18.08	108		-	-	SR	☒	
			09:37	BO			° 22.81	° 18.08		103	-			☐	
			09:39	EN			° 22.81	° 18.08			-			☐	
023	66	23	10:11	BE	ROS		48° 19.30	123° 14.13	104		-	-	SR	☒	
			10:13	BO			° 19.30	° 14.13		99	-			☐	
			10:15	EN			° 19.28	° 14.13			-			☐	
024	65	23	10:49	BE	ROS	us	48° 15.93	123° 9.80	122		-	-	SR	☒	
			10:53	BO			° 15.94	° 9.80		118	-			☐	
			11:04	EN			° 15.94	° 9.79			-			☐	
025	64	23	11:36	BE	ROS		48° 12.82	123° 5.80	111		-			☐	
			11:38	BO			° 12.82	° 5.81		106	-			☐	
			11:40	EN			° 12.83	° 5.81			-			☐	
026	63	23	12:20	BE	NET		48° 14.598	122° 58.544	153		-		KS	☐	
			12:24	BO			° 14.602	° 58.556		143	-			☐	
			12:26	EN			° 14.593	° 58.541			-			☐	
			:				°	°			-			☐	

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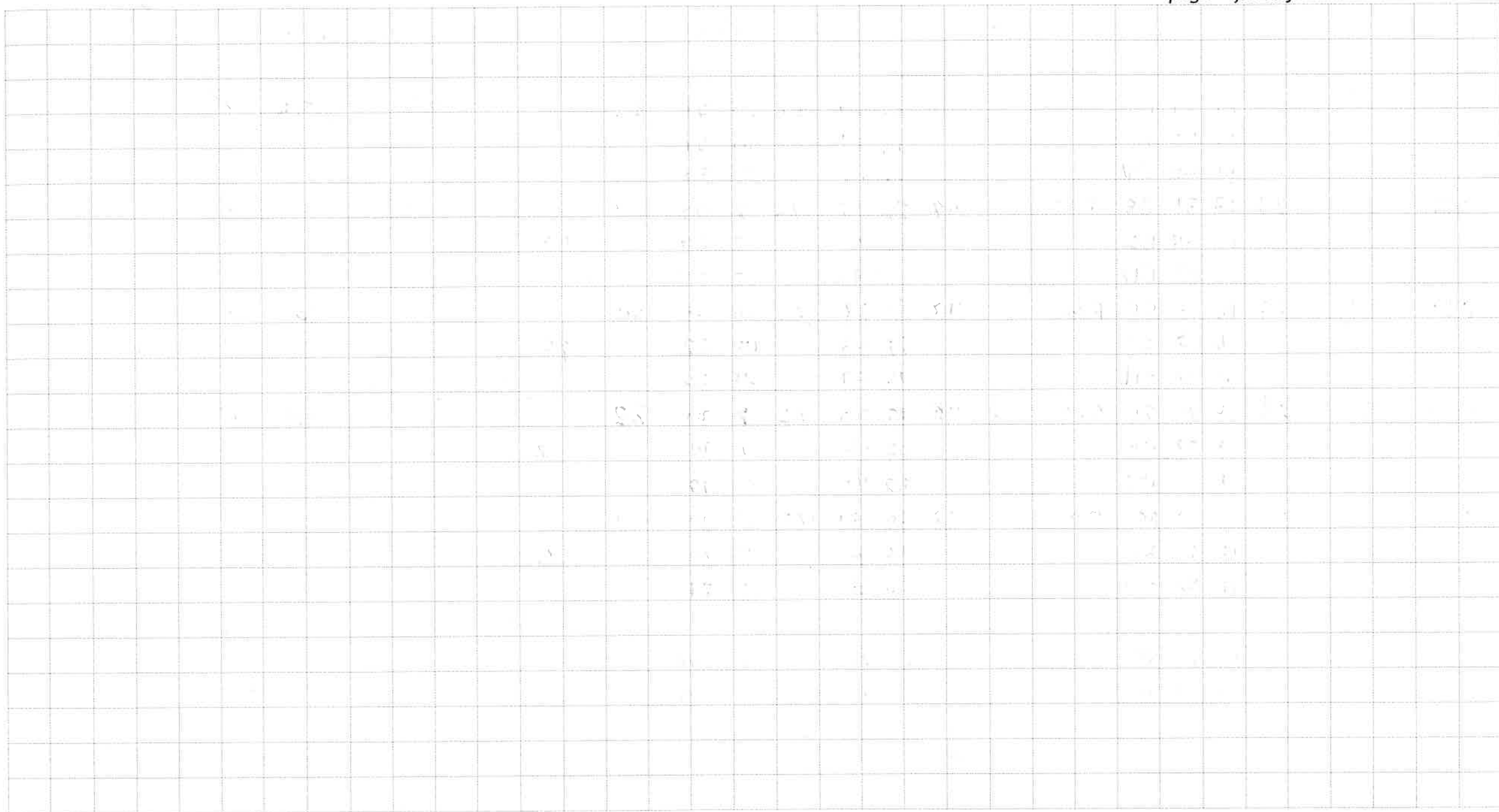
DE = Deployment Time
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Notes:

This page is for any notes or observations



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Month <u>June</u>				Year <u>2017</u>			Vessel <u>Vector</u>			Cruise ID <u>2017-64</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
027	63	23	12:37	BE	ROS	US	48° 14.59	122° 58.51	153		105-108	4	SR	☒	
			12:40	BO			° 14.59	° 58.51			-			☐	
			12:45	EN			° 14.60	° 58.51			-			☐	
028	62	23	13:51	BE	ROS	US	48° 22.79	123° 2.65	149		109-120	12		☒	
			13:54	BO			° 22.79	° 2.64		145	-			☐	
			14:08	EN			° 22.80	° 2.64			-			☐	
029	54	23	16:17	BE	ROS		48° 26.69	122° 44.31	78				SR	☒	Trip mechanism
			16:19	BO			° 26.65	° 44.32		75	-			☐	was replaced
			16:20	EN			° 26.59	° 44.34			-			☐	as were many
030	53	23	17:31	BE	ROS		48° 33.20	122° 44.99	61				SR	☒	spigot o-rings
			17:33	BO			° 33.16	° 44.98		58	-			☐	→
			17:34	EN			° 33.14	° 44.99			-			☐	
031	52	23	18:29	BE	ROS		48° 38.89	122° 43.29	82				SR	☒	
			18:31	BO			° 38.90	° 43.29		78	-			☐	
			18:32	EN			° 38.90	° 43.29			-			☐	
			:				° .	° .			-			☐	
032	51	23	19:17	BE	ROS		48° 46.66	122° 51.44	156					☒	
			20:00	BO			° 46.67	° 51.45		151	-			☐	
			20:03	EN			° 46.68	° 51.47			-			☐	

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Notes:

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The ship drifted with the current during the cast

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Month <u>JUNE</u>				Year <u>2017</u>			Vessel <u>VECTOR</u>				Cruise ID <u>2017-64</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
033	57	23	22:09	BE	ROS		48° 44.12	123° 08.02	149		-		Re	☒	
			22:12	BO			° 44.19	° 07.97		144	-			☐	
			22:15	EN			° 44.20	° 07.91			-			☐	
			:				° .	° .			-			☐	
034	56	23	22:45	BE	ROS	US	48° 46.40	123° 01.64	205		-		Re	☒	
			22:52	BO			° 46.46	° 01.56		200	121-135	15		☐	
			23:06	EN			° 46.64	° 01.92			-			☐	
			:				° .	° .			-			☐	
035	47	23	23:56	BE	ROS		48° 49.28	123° 06.22	182		-		Re	☒	+3
			23:59	BO			° 49.28	° 06.21		178	-			☐	micro fluorescence probe
		24	00:02	EN			° 49.28	° 06.21			-			☐	@ 10 m
			:				° .	° .			-			☐	
036	48	24	00:44	BE	ROS		48° 51.41	123° 03.66	220		-		Re	☒	
			00:48	BO			° 51.43	° 03.66		217	-			☐	
			00:52	EN			° 51.45	° 03.64			-			☐	
			:				° .	° .			-			☐	
037	49	24	01:28	BE			48° 54.97	122° 59.65	133		-		Re	☒	
			01:31	BO			° 54.97	° 59.64		130	-			☐	
			01:34	EN			° 54.97	° 59.63			-			☐	

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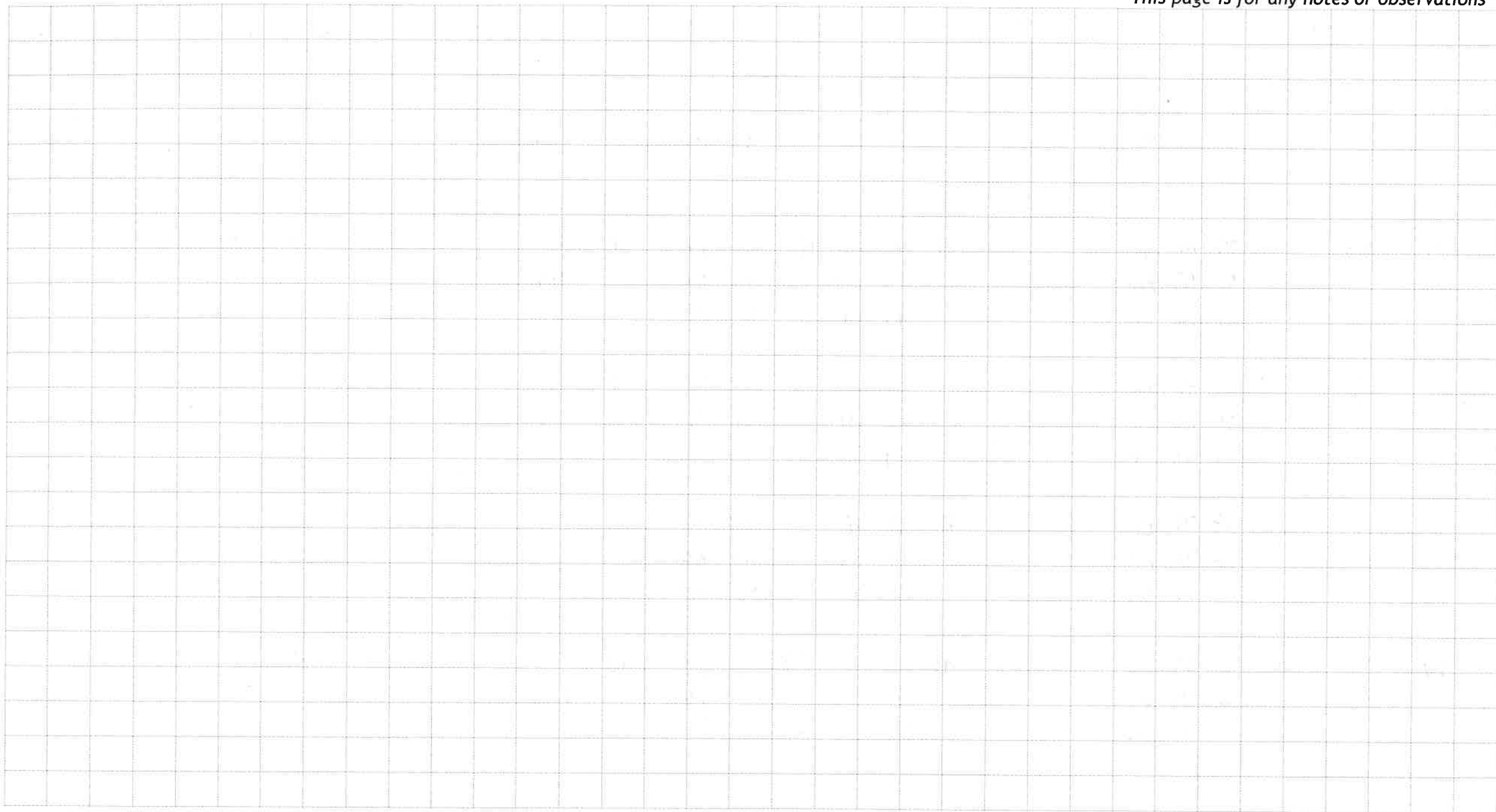
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038	50	24	02:22	BE	ROS		48° 57.71	122° 56.14	26		-		RE	☒ ☐	
			02:22	BO			° 57.70	° 56.15		23	-			☐ ☐	
			02:23	EN			° 57.70	° 56.16			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
039	44	24	03:10	BE	ROS		48° 56.81	123° 05.99	119		-		RE	☒ ☐	
			03:12	BO			° 56.81	° 06.00		117	-			☐ ☐	
			03:15	EN			° 56.81	° 06.00			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
040	45	24	03:46	BE	ROS		48° 53.85	123° 08.31	127		-		PVB	☒ ☐	
			03:48	BO			° 53.86	° 08.31		125	-			☐ ☐	
			03:51	EN			° 53.87	° 08.27			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
041	46	24	04:21	BE	NET		48° 51.36	123° 10.73	179		-		RIP	☐ ☐	
			04:26	BO			° 51.32	° 10.64			-			☐ ☐	
			04:29	EN			° 51.30	° 10.57			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
042	46	24	04:42	BE	ROS	US	48° 51.37	123° 10.78	180		136-148		RE	☒ ☐	
			04:45	BO			° 51.29	° 10.73			-	13		☐ ☐	
			04:59	EN			° 51.13	° 10.61			-			☐ ☐	

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US = Up / Stop (default)
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 DN = Down / No stop

Notes:

Time Code:

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

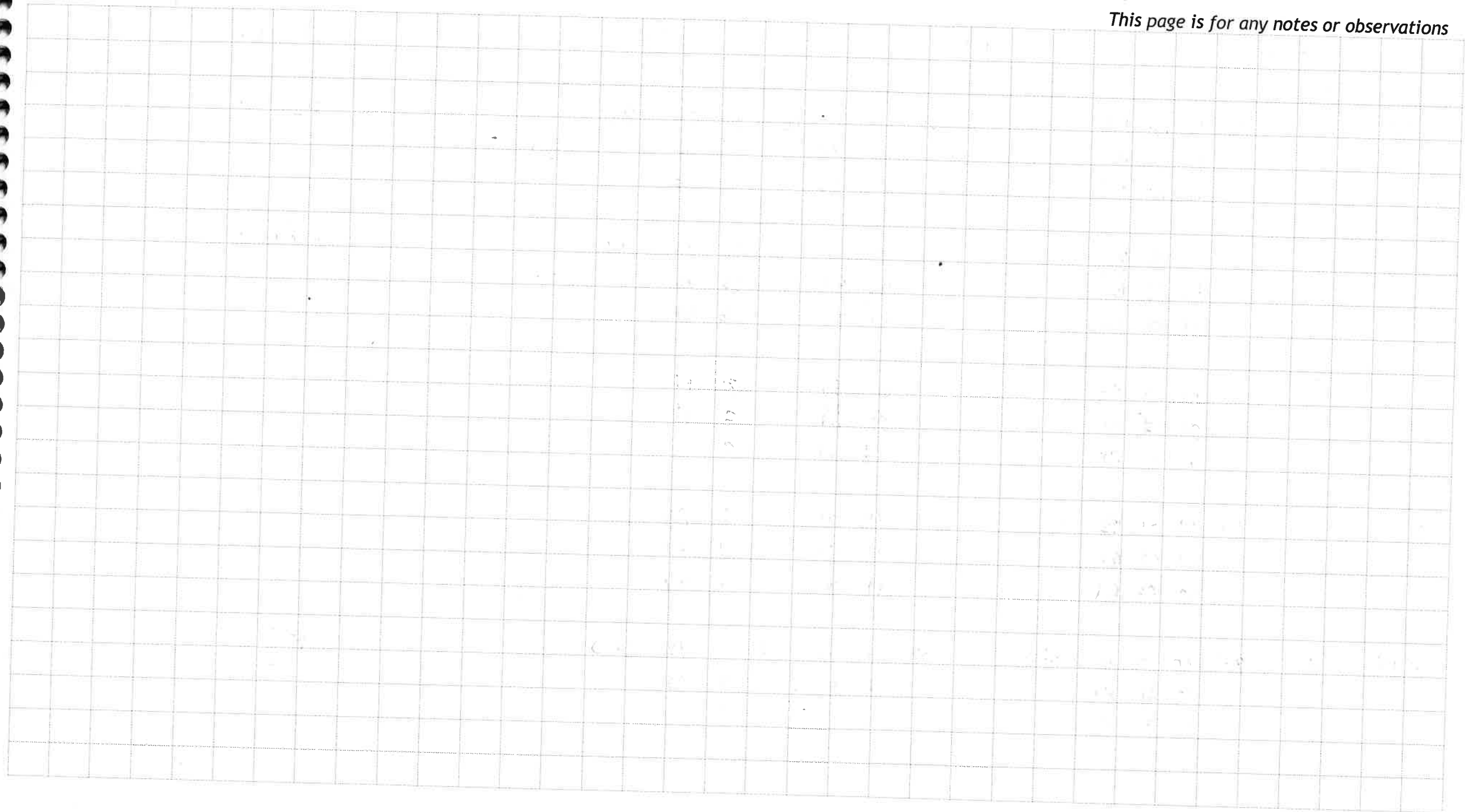
CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>JUNE</u>				Year <u>2017</u>		Vessel <u>VECTOR</u>				Cruise ID <u>2017-64</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
043	106	24	06:12	BE	ROS		49° 01.01	123° 13.11	75		-		PC	☒	
			06:14	BO			° 00.96	° 13.10		73	-			☐	
			06:15	EN			° 00.93	° 13.10			-			☐	
			:				°	°			-			☐	
044	107	24	06:51	BE			48° 58.41	123° 18.00	180		-		PC/SR	☒	
			06:55	BO			° 58.39	° 17.98		177	-			☐	
			06:58	EN			° 58.39	° 17.99			-			☐	
045	43	24	08:06	BE	ROS		49° 00.21	123° 30.13	196		-		SR	☐	
			08:09	BO			° 00.21	° 30.13		192	-			☐	
			08:13	EN			° 00.21	° 30.13			-			☐	
046	42	24	08:43	BE	ROS	US	49° 01.79	123° 26.16	321		149-165	17	SR	☒	
			08:49	BO			° 01.79	° 26.20		316	-			☐	
			09:01	EN			° 01.79	° 26.22			-			☐	
047	41	24	10:02	BE	ROS		49° 3.29	123° 22.31	245		-		SR	☒	
			10:06	BO			° 3.29	° 22.30		240	-			☐	
			10:11	EN			° 3.30	° 22.28			-			☐	
048	41	24	10:19	BE	NET		49° 3.303	123° 22.285	240		-		KS	☐	
			10:27	BO			° 3.315	° 22.289		230	-			☐	
			10:31	EN			° 3.324	° 22.281			-			☐	

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

Notes:

Time Code:

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EN = End Time of Cast

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

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