DAILY SCIENCE LOG BOOK

MISSION NUMBER 2023-035

DATE: From: May 17 2023 To: June 8th 2023

VESSEL: Vector

PROJECT(S): PAC-MCT Caamano and Chatham biodiversity survey

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

** 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: SBE 19plus autonomous mode per out SBE55 (mini rosette)

Data acquisition program: SBE55 'mini' rosette

CTD deck unit make: ~~None~~ Autonomous model: 55 serial number: 0210

Primary CTD

Make: Seabird model: 19 plus serial number: 19P31599-[1345]

x Primary temperature serial number: 4345

x Primary conductivity serial number: 4345

Secondary temperature serial number: None

Secondary conductivity serial number: None

Transmissometer: None Model: ______ serial: ______

Transmissometer: ______ Model: ______ serial: ______

Fluorometer: Model ECO FLRTD Cable gain: G4 serial: 8015 P, S or (NO) pump?

Fluorometer: Model None Cable gain: ______ serial: ______ P, S or NO pump?

Oxygen sensor: SBE Model: 43 serial: 3239 P, S or (NO) pump?

PAR sensor: None Model: ______ serial: ______ **Surface PAR? Y / N**

Other sensors: Pressure serial: 2109 P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

Secondary CTD

Make: Seabird model: 19 plus serial number: 5299

x Primary temperature serial number: ~~5~~ 5299

x Primary conductivity serial number: 5299

Secondary temperature serial number: None

Secondary conductivity serial number: None

Transmissometer: None Model: ______ serial: ______

Transmissometer: None Model: ______ serial: ______

x ?? Fluorometer: Model Wetlabs ECO FLRTD Cable gain: ______ serial: 2214 P, S or (NO) pump?

Fluorometer: Model None Cable gain: ______ serial: ______ P, S or NO pump?

Oxygen sensor: SBE Model: 43 serial: 1592 P, S or (NO) pump?

PAR sensor: None Model: ______ serial: ______ **Surface PAR? Y / N**

Other sensors: Pressure ... serial: ______ P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

Other sensors: ______ serial: ______ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): ~~0.2~~ 0.02 m

This also includes the bottle location above the CTD on non-rosette casts (typical on small launches).

Rosette Setup:
Number of bottles: 6
Manufacturer: seabird SBE55
Volume of bottles (litres): 4

Rosette/Niskin Bottle Serial Numbers: SBE55 not serial numbers

1: _____	2: _____	3: _____	4: _____	5: _____
6: _____	7: _____	8: _____	9: _____	10: _____
11: _____	12: _____	13: _____	14: _____	15: _____
16: _____	17: _____	18: _____	19: _____	20: _____
21: _____	22: _____	23: _____	24: _____	

Make sure to note any bottle changes or repairs during your cruise in this log book.

Winches:
1. Make: _____ Model: _____ Serial #: _____ Used for: _____
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____
_____

Salinometer:
Make: None Model: _____ Serial Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____

Label Printers:
Primary Printer Kit #: None
Secondary Printer Kit #: _____
Software Version: _____

Thermosalinograph System (SBE21/45):
Program: _____ Version: None
Sampling interval (seconds): _____
TSG serial number: _____
Fluorometer sensor serial number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____

ADCP Setup: Nortek ~~RD~~ECO tests.
Computer time zone: _____ User Exits: Name: _____ Exit points: _____
Sampling interval (sec): 120s Name: _____ Exit points: _____
Bin Length: (2^x): _____ Name: _____ Exit points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):
Trial of Nortek ECO aka "baby ADCP". It's not programable except for setting ensemble averages

CTD Test Cast Information

Test Cast along side? Yes (No)
Comments _____

Test Cast in Saanich Inlet or other location? (Yes) No (2x)
Comments Hartley Bay Succesful casts on may 23.w/ two different program

CTD pressure reading on deck (db), before cast: _____ after cast: No real time sensors deck unit

Pumps working? (Yes) (0011) No (0010)

Secondary Temp – Primary Temp: only 1x Temp sensor.
(Average from the mixed region)

Secondary Salinity – Primary Salinity: only 1x cond sensor.
(Average from the mixed region)

Additional Comments:

FDHA & nut casts have triplicate bottles @ 2m below surface not flushed. Another triplicate bottles near "bottom that are flushed > 1min

Scientific Equipment Used During Cruise

This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for SBE 9/16/19/25.

Other CTD units:

RBR Serial Number: _____ Sensors: _____

Others: _____

Plankton Nets: One

X Bongo/SCOR #1	Frame Size: ~~250~~ 70 cm	Mesh: 250 µm	Flowmeter: _____
Bongo/SCOR #2	Frame Size: _____ cm	Mesh: _____ µm	Flowmeter: _____
_____	Frame Size: _____ cm	Mesh: _____ µm	Flowmeter: _____
_____	Frame Size: _____ cm	Mesh: _____ µm	Flowmeter: _____

Multinet ☐ BIONESS ☐ Neuston ☐ Others:

One "Bongo" net, formaldehyde for preserving. RBR pressure solo #79110 attached.

Trawl Gear:

Midwater Trawls: SOG ☐ Highseas ☐ Pelagic ☐ Other: No Trawling

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☐ Other: _____

American Shrimp Trawl ☐

Notes: _____

Trawl Doors: USA Jet ☐ Tyburon ☐ _____

Sounders : Wesmar 380 ☐ Others: _____

Acoustics:

Echosounder #1 None Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Echosounder #2 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes: _____

Other Gear in Operation:

5m, 20m, 50m, 100m, 150m, near bottom.

This page is for any notes or observations

May 19-23 2023

→ Intertidal sites in Caamaño-Douglas area (MCT uses iforms to track their data)

→ Nutrient nearshore samples collected on may 20 to 23rd.

May 20: NWFAR (2x (one duplicate)). MiniDOT

May 21: MinBay (1x sample). MiniDOT on BRUUS 1

May 22: No samples @ Kikosh Inlet. Too busy day. MiniDOT on BRUUS 1

May 23: Two samples for nutrients. First @ river mouth of west Hawkesbury creek. The 2nd @ BRUUS 3.

→

→ Two test casts with SBE19 paired w/ autonomous SBE55 rosette

- 1st using EDNA program. 3 ~~launches~~ bottles @ bottom (10m off)
  3 bottles near surface (2m)
  - No stops on upcast for surface bottle
  - 2min wait @ bottom bottles
- 2nd using nutrient program w/ stops lasting 2min @ each depth 5, 20, 30 and 40m.

May 24. First water sampling day from Vector.

1) Stn N14 visited first for EDNA+nut (surface & bottom) @ south end Gribbell Is in Wright S.
2) Stn N13 EDNA+nut in Verney Passage
3) Collected new crew @ 10:45 local
4)

Problems w/ positioning vessel so CTD taken out of water

NOTE

EDNA consists of 6 bottles → 3 trip @ bot, 3 trip @ surface
→ no IOS #'s assigned.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month may **Year** 2023 **Vessel** Vector **Cruise ID** 2023-035

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
#1	NWFAR	20 May 2023	18:38	BF	BOT	UN	53°.36015	129°.45032	~1m	~1m	-1	N/A	CB	☐☐	Nearshore
#2	NWFAR	20	18:38	BF	BOT	UN	53°21'.664	129°27.0192			-2	N/A	CB	☐☐	Duplicate
3	MinBay	21	19:35	BE	BOT	UN	53°20.5956	129°27.8819	[illegible]	[illegible]	-3		CB	☐☐	Nearshore
4	minBay Backup	22	19:17		BOT	UN	53°.551584	129°.168991	1m	1m	-4		CB	☐☐	River, mouth
5	minBay backup	23	:		BOT		°	°			-5		CB	☐☐	New BRU
6	WHIC HB-test		:		ROS	UN	53°22.585	129°16.341			-		CB	☐☐	E-DNA
7	HB-test	24	01:33		ROS	US	53°22.585	129°16.341			6-9		CB	☐☐	Rosette test
8	N14	24	15:21	"	ROS	UN	[illegible]	[illegible]			about that	6	CB	☐☐	E-DNA
9	N14	24	16:45	"	ROS	UN	53°[illegible]	129°[illegible]			-11	6	CB	☐☐	Aborted E-DNA
10	N13	24	17:00	"	ROS	UN	53°[illegible]	129°[illegible]	400m		12-13	6	CB	☐☐	E-DNA [illegible]
11	13 ver	24	19:07	"	ROS	UN	53°.484814	129°.083256	162m		14-15	6	CB	☐☐	
12	9 ver	24	19:50		ROS	UN	53°[illegible]	129°[illegible]	110m			6	CB	☐☐	
13	5 ver	24	20:[illegible]	BE	ROS	un	53°.505[illegible]	129°.098239	35m		16-17	6	CB	☐☐	
14	12 Urs	24	21:54	BE	ROS	UN	53°.432719	129°.932491	420		18-19	6	CB	☐☐	mEDNA
US 15	12 Urs	24	22:49	BE	ROS	US	53°.43.2524	128°.932006	420		20-27		CB	☐☐	EDNA + nu
16	UC 43	25	00:39	BE	ROS	US	53°.483602	128°.977330	109		20-25	6	CB	☐☐	Nutrients
17	UC 43	25	01:10	BE	NET		53°.483674	128°.977304	109		28-33	6	CB	☐☐	Nutrients
			:	END			°	°			NET-1		CB, FR	☐☐	20' Bongo
			:	END	1st Day		° Water	Sampling			-			☐☐	
											-			☐☐	

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 p

Notes: UN: Flushed [illegible]

Local = +7 +UTC

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May **Year** 2023 **Vessel** Vector **Cruise ID** 2023-035 ND

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
#1	NWFAR	20 MAY 2023	18:38	~~BE~~	BOT	UN	53°.36015	129°.45032	~1m	~1m	- 1	N/A	CB	☐☐	Nearshore sample
#2	NWFAR	20	18:38	BE	BOT	UN	53°21'.609	-129°27.0192	"	"	- 2	NA	CB	☐☐	Duplicate
3	MinBay	21	19:35	BE	BOT	UN	53°20.5956	-129° 27.8814	1m	~0.5m	- 3		CB	☐☐	Nearshore sample
4	MinBay Backup	21	19:17	"	BOT	UN	53°.551584	129°.168991	1m	1m	- 4		CB	☐☐	River mouth
* 5	MinBay Backup WHIC HB-TEST	23	:	"	BOT		° .	° .			- 5		CB	☐☐	Near BRUV3
✓ 6			:	"	ROS	UN	53°22.585	129° 16.341			-			☐☐	E-DNA -test
✓ ~~6~~ 7	HB-TEST	23	01:33	"	ROS	US	53°22.585	129° 16.341			6 - 9		CB	☐☐	Rosette test-nut
✓ 8	N14	24	15:21	"	ROS	UN	53°.31580	129°.137579 WP265			about 6 bart	6	CB	☐☐	E-DNA 08:21 local
9	N14	24	15:45	"	ROS	UN	53°.316058	129°.13733 265	~87m		10 - 11	6	CB	☐☐	Aborted 08:45 EDNA 08:50 E
10	N13	24	17:00	"	ROS	UN	53°372709	129°.15229	400m		12 - 13	6	CB	☐☐	EDNA+nut ~~07~~ 10:03
11	18 Ver	24	19:07	"	ROS	UN	53°484814	129° 083256	162m		14 - 15	6	CB	☐☐	"
12	9 Ver	24	19:50		ROS	UN	53°505467	129°058708	110m		16 - 17	6	CB	☐☐	"
13	5 Ver	24	20:39	BE	ROS	UN	53°.505483	129°.058739	35m		~~16~~ 18 - ~~19~~ 19	6	CB	☐☐	EDNA + nutrients
14	12 Urs	24	21:54	BE	ROS	UN	53°.432719	129° 932491	420		26 - 27		CB	☐☐	EDNA + neutrons
UP 15	12 Urs	24	22:49	BE	ROS	US ~~UN~~	53°.43.2524	128°.932006	420		20 - 25	6	CB	☐☐	Nutrients only
16	UC43	25	00:39	BE	ROS	US	53°.483602	128°.977330	109		28 - 33	6	CB	☐☐	Nutrients only
17	UC43	25	01:10	BE	NET		53°.483674	128°.977304	109		NET - 1		CB, ER	☐☐	Bongo
			:		~~END~~		° .	° .			-			☐☐	
			:		END		1st Day° water sampling				-			☐☐	

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Time Code:
BE = Beginning Time of Cast
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DE = Deployment Time
MR = Messenger Release Time
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

Notes: UN: Flushed @ bottom but not at surface (2m depth)

Event # 8 CTD aborted because drifting towards shore
CTD was in water & taken out. Pump was running unfortunately
"Refluxed" CTD in water
Event # 9: Repeat CTD but data of Event 8 & 9 will be in same file cast #4

This page is for any notes or observations

+7

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May **Year** 2023 **Vessel** Vector **Cruise ID** 2023-035

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
18	20 GAR	25	14:49	BE	ROS	UN	53.491620	128.525954			34 - 35	6	CB FR	☐☐	EDNA + nut
19	3GAR	25	15:30	BE	ROS	UN	53.443485	128.523579			36 - 37		CB FR	☐☐	EDNA + nut
20	6GAR	25	16:40	BE	ROS	UN	53°49.5837	128.704057	43		38 - 39		CB FR	☐☐	EDNA + nut
21	6GAR D	25	17:24	BE	ROS	US	53°49.6512	128.710653	182		40 - 45		CB	☐☐	Nutrients
22	13GAR	25	19:12	BE	ROS	UN	53.553708	128.767073	193		46 - 47		CB	☐☐	EDNA + NUT
23	ARMG	25	:		Boat		° .	° .			48 - 49		CB	☐☐	Surface nut AM
24	4GAR	25	21:11	BE	ROS	US	53.571037	128.793335	173		50 - 53		CB	☐☐	EDNA + nut Dups
~~25~~	~~16DEV~~		:				° .	° .			~~54 - 57~~		CB	☐☐	EDNA + nut
25	16 DEV	25	22:01	BE	ROS	US	53.612079	128.823985	146		55 - 58		CB	☐☐	EDNA, nut dup
26	16DEV NUT	25	22:40	BE	ROS	UN	53.612126	128.823993			59 - 64		CB	☐☐	Nutrients only
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

Notes: UN = no stop on top bottles, but flushed near bottom

This page is for any notes or observations

End of May 25 → 5 duplicates for 60 samples (tad short)

→ sample 54 is missing for [illegible]. It was skipped accidently.

+7 ⊙

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May **Year** 2023 **Vessel** Veeter **Cruise ID** 2023-35

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
27	11 Ver	26	16:11	BE	ROS	UN	53.° 556649	128.°954383	173		65 - 68	6	ER	☐☐	EDNA + nut dup
28	14 Ver	26	17:13	BE	ROS	UN	53.° 57.9914	128.° 7.1911	207		69 - 72	6	CB ER	☐☐	"
29	14 Ver NUT	26	17:59	BE	ROS	US	53.° 562.720	128.° 96.7972	235		73 - 78	5	CB	☐☐	Nutrients mid-
30	22 ~~Ver~~ urs	26	19:12	BE	ROS	UN	53.° 51.9621	128.° 976644	80		79 - 82	6	CB	☐☐	EDNA + nut dup
31	10 urs	26	19:57	BE	ROS	UN	53.° 51972	128.° 976695	70		83 - 84	6	CB	☐☐	EDNA + nut
32	KKT	27	03:13		BOT		53° 30. 906	129° 16 .219	~10		85 - 86	2	CB	☐☐	Palmira near surface Inlet
33	Bishop	26	23:08		BOT		53.°26 .643	128° 53..36	121		87 - 88	2	CB	☐☐	" surface BBay
34	17 urs	26	21:29	BE	ROS	UN	53.° 373939	128.° 897.106	487		89 - 90	6	CB	☐☐	EDNA ~~+ nut~~ Bact nut
35	17urs ~~NUT~~	26	22:25	BE	ROS	UN	53.° 374209	128.° 896.333	497		91 - 96	6	CB	☐☐	~~Nutrients~~ EDNA + nut
			:				° .	° .	48		-			☐☐	
36	17urs-NUT	26	23:28	BE	ROS	US	53.° 374087	128.° 896686	487		91 - 96	6	CB	☐☐	Nutrients
37	NU2	27	01:01	BE	ROS	US	53.° 35.7753	128.° 917151	212		97 - 98	6	CB, ER	☐☐	EDNA @ bottom & 90m
			:				° .	° .			-			☐☐	
	EWO DAY 3	water	sampling				° .	° .			-			☐☐	
	TRANSIT TO PR		:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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

Notes: cast 34 bottles tripped @ 225m instead of bottom

Produced by the Water Properties Group, IOS

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Version: 17 Feb 2020

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May | **Year** 2023 | **Vessel** Vector | **Cruise ID** 2023-035

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
38	Sponge Reef	29	16:38	BE	ROS	UB	54° 12.50	130° 27.12	58	43	-	6	cw	☒ ☐	cast 38 only - no cast 37
			16:43	BO			° 12.534	° 27.14			-			☐ ☐	
			16:48	EN			° 12.507	° 27.157			-			☐ ☐	
39	18GUL_RCA	29	17:41	BE	ROS	UB	54° 10.396	130° 31.048	110		-	6	cw	☒ ☐	
			17:46	BO			° 10.396	° 31.045		100	-			☐ ☐	
			17:50	EN			° 10.396	° 31.048			-			☐ ☐	
40	23GUL_RCA	29	18:23	BE	ROS	UB	54° 09.136	130° 32.436	54		-	6	cw	☒ ☐	
			18:27	BO			° 09.134	° 32.439		44	-			☐ ☐	cast 33
			18:30	EN			° 09.146	° 32.449			-			☐ ☐	
41	19GUL_RCA	29	23:02	BE	ROS	UB	54° 08.022	130° 29.922	79		-	6	cw	☒ ☐	Cast 34
			23:07	BO			° 08.025	° 29.914		69	-			☐ ☐	
			23:11	EN			° 08.024	° 29.919			-			☐ ☐	
42	22GUL_RCA	30	00:04	BE	ROS	UB	54° 08.648	° 29.913	71		-			☐ ☐	cast 35
			00:08	BO			° 08.652	° 29.913		61	-			☐ ☐	omit cast
			00:	EN			° .	° .			-			☐ ☐	bottles & fir-
43	22GUL_RCA	30	00:22	BE	ROS	US	54° 08.652	130° 29.895	71		-			☐ ☐	
			00:27	BO			° 08.651	° 29.909		61	-			☒ ☐	= CAST 36
			00:31	EN			° 08.649	° 29.910			-			☐ ☐	=
			:				° .	° .			-			☐ ☐	

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DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
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Time Code:
BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

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Version: 17 Feb 2020

1) Cleared fluorometer @ start of day May 24th.

Event
~~Cast~~ 38 - 2min soak @ 10m
- 2min @ bot - trip 3
- 3 trip on surf on way up
↳ 2m

↓
NOTE timestamp is incorrect 073536?

PBS Cast # 5
↑
this is the CTD cast #

Event #9 = Cast 32 - started to early so lots of junk deck data
timestamp = 08:33:50

looks like CTD is on PST

17/8

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May **Year** 2023 **Vessel** Vector **Cruise ID** 2023-025

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
44	20GW_RCA	30	01:43	BE	ROS	US	54° 08.755	130° 28.124	76		-	6	cw/s	☑ ☑	Cast 37
			01:48	BO			°08.452	°28.125		2..				☐ ☐	222 casts
			01:52	EN			°08.452	°28.123			-			☐ ☐	eDNA only
45	SpongeReef15	30	17:19	BE	ROS	US	54° 28.937	130° 33.014	83			6	cw/s	☑ ☑	cast 38
			17:23	BO			°28.834	°33.015		72	-			☐ ☐	(shallowed up)
			17:26	EN			°28.834	°33.017			-			☐ ☐	
46	SpongeReef11	30	18:15	BE	ROS	US	54° 24.041	130° 35.139	76			6	cw/s	☑ ☑	cast 39
			18:18	BO			°24.040	°35.142		66	-			☐ ☐	
			18:22	EN			°24.039	°35.140			-			☐ ☐	
47	9HOD_RCA	30	18:51	BE	ROS	US	54° 23.30	130° 32.84	37			6	cw/s	☑ ☑	cast 40
			18:54	BO			°23.302	°32.537		27	-			☐ ☐	
			18:57	EN			°23.302	°32.537			-			☐ ☐	
48	SpongeReef6	31	15:58	BE	ROS	US	54° 23.249	130° 34.759	56			6	cw/s	☑ ☑	
			16:02	BO			°23.245	°34.752		46	-			☐ ☐	cast 41
			16:05	EN			°23.248	°34.748			-			☐ ☐	
49	SpongeReef2	31	16:36	BE	ROS	US	54° 22.452	130° 37.508	100			6	cw/s	☑ ☑	cast 42
			16:41	BO			°22.457	°37.573		90	-			☐ ☑	
			16:45	EN			°22.463	°37.579			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
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Notes: _____

Sponge Reef 6 local time BE = 0758 PDT

-ooo casts on May 31 = eDNA

~~505~~ 52 57.483
~~505~~ 129 24.762

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month May **Year** 2023 **Vessel** Vector **Cruise ID** 2023-035

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
50	Sponge Reef 1	31	17:08	BE	ROS	US	54° 21.855	130° 37.509	71			6	cw/SS	☐☑	Cast 1 of 3
			17:14	BO			° 21.855	° 37.505		67	-			☐☐	
			17:17	EN			° 21.855	° 37.503			-			☐☐	
51	17GUL_RCA	31	18:49	BE	ROS	US	54° 11.142	130° 32.938	65			6	cw/SS	☐☑	Cast 44
			18:53	BO			° 11.142	° 32.930		55	-			☐☐	
			18:58	EN			° 11.145	° 32.930			-			☐☐	
52	16GUL_RCA	31	19:18	BE	ROS	US	54° 10.699	130° 32.187	93			6	cw/SS	☐☑	cast 45
			19:24	BO			° 10.698	° 32.187		83	-			☐☐	
			19:27	EN			° 10.701	° 32.186			-			☐☐	
53	21GUL_RCA	31	20:18	BE	ROS	US	54° 09.561	130° 29.660	100			6	cw/SS	☒☑	cast 46
			20:23	BO			° 09.563	° 29.654		90	-			☐☐	
			20:27	EN			° 09.563	° 29.642			-			☐☐	
54	505	1	23:04	BE	ROS	US	52° 57.475	129° 24.764	64		-	6	cw/SS	☐☑	cast 47
			23:09	BO			° 57.475	° 24.771		54	-			☐☐	
			23:12	EN			° 57.476	° 24.763			-			☐☐	
55	509	1	23:47	BE	ROS	US	52° 55.206	129° 20.868	239		-			☐☐	cast 48
			23:54	BO			° 55.198	° 20.875		226	-			☐☐	
		2	00:02	EN			° 55.207	° 20.885			-			☐☐	
			:				° .	° .			-			☐☐	

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Notes: _____

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505, 509 are in the MCA sites
505 local time =