

# DAILY SCIENCE LOG BOOK

CRUISE  
NUMBER

2018-05

DATE:

From: 2 FEB 2018

To:

VESSEL:

CCGS VECTOR

PROJECT(S):

STRAIT OF GEORGIA / VANCOUVER HARBOUR  
WATER PROPERTIES SURVEY

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

[WaterProperties.ca](http://WaterProperties.ca)



**\*\* 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: Vector Laptop

Data acquisition program: Seasave.

CTD deck unit make: SBE model: 11+ serial number: \_\_\_\_\_

#### Primary CTD

Make: SBE model: 9+ serial number: 1222

Primary temperature serial number: 2106

Primary conductivity serial number: 2280

Secondary temperature serial number: 2663

Secondary conductivity serial number: 2754

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

Transmissometer: \_\_\_\_\_ Model: \_\_\_\_\_ s/n: \_\_\_\_\_

Fluorometer: Model Seapoint Cable gain: 10X s/n: 3642 P, S or NO pump?

Fluorometer: Model \_\_\_\_\_ Cable gain: \_\_\_\_\_ s/n: \_\_\_\_\_ P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 3038 P, S or NO pump?

PAR sensor: Biospherical Model: \_\_\_\_\_ s/n: 4565 Surface PAR? Y / N

Other sensors: Altimeter s/n: 62355 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?

#### Secondary CTD

Make: SBE model: 25 serial number: 404

Primary temperature serial number: 2449

Primary conductivity serial number: 1764

Secondary temperature serial number: \_\_\_\_\_

Secondary conductivity serial number: \_\_\_\_\_

Transmissometer: \_\_\_\_\_ Model: \_\_\_\_\_ s/n: \_\_\_\_\_

Transmissometer: \_\_\_\_\_ Model: \_\_\_\_\_ s/n: \_\_\_\_\_

Fluorometer: Model ECO Cable gain: \_\_\_\_\_ s/n: 4185 P, S or NO pump?

Fluorometer: Model \_\_\_\_\_ Cable gain: \_\_\_\_\_ s/n: \_\_\_\_\_ P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 1176 P, S or NO pump?

PAR sensor: \_\_\_\_\_ Model: \_\_\_\_\_ s/n: \_\_\_\_\_ Surface PAR? Y / N

Other sensors: Pressure SBE 29 s/n: 0464 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-rossette casts (e.g., W.E. Ricker)



## DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

| Month FEB    |              |     |            | Year 2018 |            |               | Vessel VECTOR       |                       |              | Cruise ID 2018-05 |                       |              |               |                                                              |                  |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|--------------|-------------------|-----------------------|--------------|---------------|--------------------------------------------------------------|------------------|
| 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         |
| 1            | 51           | 2   | 23:15      | BE        | ROS        | US            | 48 ° 39 . 295       | 123 ° 30 . 767        | 176          |                   | 1 - 9                 | 9            | R             | <input checked="" type="checkbox"/> <input type="checkbox"/> | timings ?        |
|              |              |     | 23:18      | BO        |            |               | ° 39 . 305          | ° 30 . 754            |              | 100               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
|              |              |     | 23:32      | EN        |            |               | ° 39 . 350          | ° 30 . 733            |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
| 2            | 58           | 3   | 01:43      | BE        | ROS        |               | 48 ° 43 . 036       | 123 ° 14 . 267        | 333          |                   | -                     |              | R             | <input checked="" type="checkbox"/> <input type="checkbox"/> |                  |
|              |              |     | 01:52      | BO        |            |               | ° 43 . 049          | ° 14 . 303            |              | 340               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
|              |              |     | 01:57      | EN        |            |               | ° 43 . 044          | ° 14 . 322            |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
| 3            | 58           | 3   | 02:01      | DE        | DRF        |               | 48 ° 43 . 044       | 123 ° 14 . 322        |              |                   | -                     |              | R             | <input type="checkbox"/> <input type="checkbox"/>            | 3 SCT drifters   |
| 4            | 59           | 3   | 02:59      | BE        | NET        |               | 48 ° 37 . 797       | 123 ° 14 . 601        | 231          |                   | -                     |              | R             | <input type="checkbox"/> <input type="checkbox"/>            |                  |
|              |              |     | 03:05      | BO        |            |               | ° 37 . 799          | ° 14 . 639            |              | 222               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
|              |              |     | 03:09      | EN        |            |               | ° 37 . 798          | ° 14 . 633            |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
| 5            | 59           | 3   | 03:20      | BE        | ROS        | US            | 48 ° 37 . 809       | 123 ° 14 . 660        | 229          |                   | 10 - 23               |              | R             | <input checked="" type="checkbox"/> <input type="checkbox"/> | bottle to spigot |
|              |              |     | 03:24      | BO        |            |               | ° 37 . 810          | ° 14 . 686            |              | 225               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | loose connection |
|              |              |     | 03:39      | EN        |            |               | ° 37 . 837          | ° 14 . 674            |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
| 6            | 57           | 3   | 05:15      | BE        | ROS        |               | 48 ° 43 . 996       | 123 ° 8 . 124         | 162          |                   | -                     |              | R             | <input checked="" type="checkbox"/> <input type="checkbox"/> |                  |
|              |              |     | 05:19      | BO        |            |               | ° 43 . 984          | ° 8 . 107             |              | 158               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
|              |              |     | 05:22      | EN        |            |               | ° 43 . 982          | ° 8 . 108             |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                  |
| 7            | 56           | 3   | 06:06      | BE        | ROS        | US            | 48 ° 46 . 385       | 123 ° 1 . 608         | 212          |                   | 24 - 37               | 14           | R             | <input type="checkbox"/> <input type="checkbox"/>            | strong flow      |
|              |              |     | 06:12      | BO        |            |               | ° 46 . 368          | ° 1 . 589             |              | 200               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | cannot reach     |
|              |              |     | 06:25      | EN        |            |               | ° 46 . 375          | ° 1 . 600             |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | bottom           |

## 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:

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

Produced by the Water Properties Group, IOS

WaterProperties.ca  
 Version: 6 December 2016

depart Port Bay 14:10 Feb 2

clear + calm

- swap out seapoint fluorometer
- soak rosette at 10 m for 1-2 min

- surface PAR mounted on boat deck rather than aft rail

- released

809 ; 818 ; 814

very strong tidal flow, long lead aft on rosette wire, could not get rosette deeper than 202 m

- bottle 5 tripped but did not seal - no data

10.249 56.136

## DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month        |              |     | Year       |           | Vessel     |               | Cruise ID           |                       |              |                   |                       |              |               |                                     |                          |                |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|--------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|--------------------------|----------------|
| FEB          |              |     | 2018       |           | VECTOR     |               | 2018-05             |                       |              |                   |                       |              |               |                                     |                          |                |
| 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                 |                |
| 8            | 56           | 3   | 06:27      | DE        | DRF        |               | 48°46.380           | 123°1.578             |              |                   | -                     |              | <i>RE</i>     | <input type="checkbox"/>            | <input type="checkbox"/> | 3 SCT drifters |
| 9            | 47           | 3   | 07:25      | BE        | ROS        |               | 48°49.292           | 123°6.179             | 183          |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 07:28      | BO        |            |               | °49.296             | °6.186                |              | 177               | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 07:31      | EN        |            |               | °49.300             | °6.203                |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
| 10           | 48           | 3   | 08:02      | BE        | ROS        |               | 48°51.426           | 123°3.425             | 201          |                   | -                     |              | <i>SR</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                |
|              |              |     | 08:06      | BO        |            |               | °51.458             | °3.376                |              | 196               | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 08:10      | EN        |            |               | °51.468             | °3.380                |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
| 11           | 49           | 3   | 08:49      | BE        | ROS        |               | 48°54.986           | 122°59.599            | 128          |                   | -                     |              | <i>SR</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                |
|              |              |     | 08:54      | BO        |            |               | °55.013             | °59.610               |              | 126               | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 08:57      | EN        |            |               | °55.022             | °59.605               |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
| 12           | 50           | 3   | 09:32      | BE        | ROS        |               | 48°57.697           | 122°56.029            | 27           |                   | -                     |              | <i>SR</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                |
|              |              |     | 09:33      | BO        |            |               | °57.702             | °56.042               |              | 22                | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 09:33      | EN        |            |               | °57.704             | °56.050               |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
| 13           | 44           | 3   | 10:25      | BE        | ROS        |               | 48°56.838           | 123°5.959             | 118          |                   | -                     |              | <i>SR</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                |
|              |              |     | 10:28      | BO        |            |               | °56.837             | °5.958                |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 10:30      | EN        |            |               | °56.836             | °5.958                |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
| 14           | 45           |     | 11:02      | BE        | ROS        |               | 48°53.928           | 123°8.405             | 128          |                   | -                     |              | <i>SR</i>     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                |
|              |              |     | 11:05      | BO        |            |               | °53.926             | °8.396                |              | 124               | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |
|              |              |     | 11:07      | EN        |            |               | °53.926             | °8.398                |              |                   | -                     |              |               | <input type="checkbox"/>            | <input type="checkbox"/> |                |

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816 ; 821 ; 815



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| Month <u>Feb</u> |              |     | Year <u>2018</u> |           |            | Vessel <u>Vector</u> |                     |                       | Cruise ID <u>2018-05</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    |
| 15               | 46           | 3   | 11:36            | BE        | NET        |                      | 48° 51.424          | 123° 10.799           | 172                      |                   | -                     |              | MB/CW         | <input type="checkbox"/>            |             |
|                  |              |     | 11:43            | BO        |            |                      | ° 51.425            | ° 10.796              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 11:45            | EN        |            |                      | ° 51.439            | ° 10.782              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
| 16               | 46           | 3   | 11:58            | BE        | ROS        | US                   | 48° 51.425          | 123° 10.784           | 174                      |                   | 38-49                 | 12           | SR            | <input type="checkbox"/>            |             |
|                  |              |     | 12:03            | BO        |            |                      | ° 51.426            | ° 10.784              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 12:20            | EN        |            |                      | ° 51.425            | ° 10.798              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
| 17               | 46           | 3   | 12:21            | BE        | DRF        |                      | 48° 51.414          | 123° 10.789           | 174                      | 0                 | -                     |              | SR            | <input type="checkbox"/>            | 801,819,796 |
| 18               | 107          | 3   | 13:20            | BE        | ROS        |                      | 48° 58.417          | 123° 18.036           | 183                      |                   | /                     | /            | SR            | <input checked="" type="checkbox"/> |             |
|                  |              |     | 13:24            | BO        |            |                      | ° 58.420            | ° 18.020              |                          | 180               | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 13:27            | EN        |            |                      | ° 58.428            | ° 18.011              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
| 19               | 106          | 3   | 14:04            | BE        | ROS        |                      | 49° 1.024           | 123° 13.240           | 78                       |                   | /                     | /            | SR            | <input checked="" type="checkbox"/> |             |
|                  |              |     | 14:06            | BO        |            |                      | ° 1.025             | ° 13.240              |                          | 74                | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 14:07            | EN        |            |                      | ° 1.024             | ° 13.238              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
| 20               | 108          | 3   | 14:53            | BE        | ROS        |                      | 49° 4.405           | 123° 19.093           | 91                       |                   | /                     | /            | SR            | <input checked="" type="checkbox"/> |             |
|                  |              |     | 14:55            | BO        |            |                      | ° 4.408             | ° 19.109              |                          | 87                | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 14:56            | EN        |            |                      | ° 4.409             | ° 19.126              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |
| 21               | 41           | 3   | 15:24            | BE        | ROS        |                      | 49° 3.302           | 123° 22.270           | 244                      |                   | /                     | /            | SR            | <input checked="" type="checkbox"/> |             |
|                  |              |     | 15:29            | BO        |            |                      | ° 3.316             | ° 22.261              |                          | 239               | -                     |              |               | <input type="checkbox"/>            |             |
|                  |              |     | 15:32            | EN        |            |                      | ° 3.320             | ° 22.244              |                          |                   | -                     |              |               | <input type="checkbox"/>            |             |

## Event Type:

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## Notes:

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

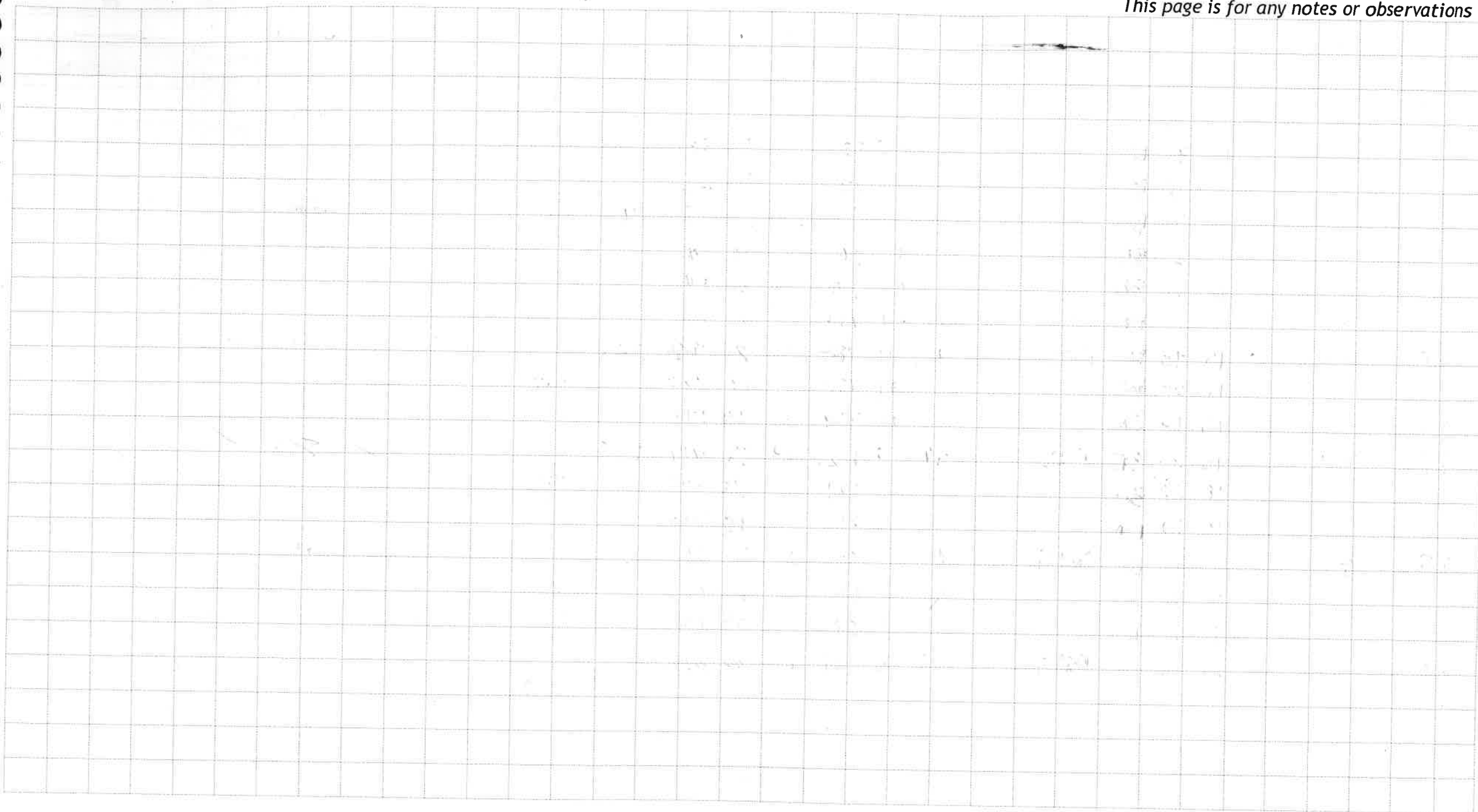
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Produced by the Water Properties Group, IOS

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Version: 6 December 2016



This page is for any notes or observations



# DAILY SCIENCE LOG

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| Month <u>Feb</u> |              |     | Year <u>2018</u> |           | Vessel <u>Vector</u> |               | Cruise ID <u>2018-05</u> |             |              |                   |                       |              |               |                                     |                |
|------------------|--------------|-----|------------------|-----------|----------------------|---------------|--------------------------|-------------|--------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|----------------|
| Event Number     | Station Name | Day | Time (UTC)       | Time Code | Event Type           | Firing Method | Positional Information   |             | Bottom Depth | Max Cast Pressure | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/Fl Cleaned                     | Comments       |
|                  |              |     |                  |           |                      |               | Latitude                 | Longitude   |              |                   |                       |              |               |                                     |                |
| 22               | 41           | 3   | 15:40            | BE        | NET                  |               | 49° 03.318               | 123° 22.249 | 242          |                   | /                     | /            | SR            | <input type="checkbox"/>            |                |
|                  |              |     | 15:47            | BO        |                      |               | ° 03.329                 | ° 22.249    |              | 233               | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 15:52            | EN        |                      |               | ° 03.345                 | ° 22.233    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 23               | 41           | 3   | 15:54            | BE        | DRF                  |               | 49° 03.350               | 123° 22.220 | 242          |                   | /                     | /            | CW            | <input type="checkbox"/>            | 793,802,808    |
| 24               | 42           | 3   | 16:20            | BE        | NET                  |               | 49° 01.781               | 123° 26.182 |              |                   | -                     |              | CW/MB         | <input type="checkbox"/>            |                |
|                  |              |     | 16:31            | BO        |                      |               | ° 01.790                 | ° 26.174    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 16:37            | EN        |                      |               | ° 01.796                 | ° 26.168    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 25               | 42           | 3   | 16:48            | BE        | ROS                  | US            | 49° 01.784               | 123° 26.168 | 322          |                   | 50-65                 | 16           | SR            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 16:54            | BO        |                      |               | ° 01.792                 | ° 26.170    |              | 318               | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 17:17            | EN        |                      |               | ° 01.794                 | ° 26.178    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 26               | 43           | 3   | 18:03            | BE        | ROS                  |               | 49° 0.192                | 123° 30.107 | 197          |                   | /                     | /            | SR            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 18:07            | BO        |                      |               | ° 0.197                  | ° 30.103    |              | 193               | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 18:10            | EN        |                      |               | ° 0.196                  | ° 30.089    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 27               | 37           | 3   | 21:09            | BE        | ROS                  |               | 49° 13.586               | 123° 20.665 | 213          |                   | /                     | /            | R             | <input checked="" type="checkbox"/> |                |
|                  |              |     | 21:14            | BO        |                      |               | ° 13.600                 | ° 20.678    |              | 209               | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 21:18            | EN        |                      |               | ° 13.594                 | ° 20.676    |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 28               | 37           | 3   | 21:21            | DE        | DRF                  |               | ° 13.581                 | 123° 20.671 |              |                   | -                     |              |               | <input type="checkbox"/>            | 3 Set Drifters |
|                  |              |     | :                |           |                      |               | ° .                      | ° .         |              |                   | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | :                |           |                      |               | ° .                      | ° .         |              |                   | -                     |              |               | <input type="checkbox"/>            |                |

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

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Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca  
Version: 6 December 2016

- SAR call - of program 10:15 - 11:15 Saturday - Vector 1 dispatched to west side of Galiano for lost man in 6' boat - discovered by other manner - Vector 1 return
- top O rings replaced on bottles 15 and 16



05114573 wif.

## DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month        |              |     |            | Year      |            | Vessel        |                     | Cruise ID             |              |                   |                       |              |               |                                     |                  |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|--------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|------------------|
| FEB          |              |     |            | 2018      |            | VECTOR        |                     | 2018-05               |              |                   |                       |              |               |                                     |                  |
| 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         |
| 29           | 38           | 3   | 21:55      | BE        | ROS        |               | 49 ° 11 . 988       | 123 ° 26 . 428        | 306          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> |                  |
|              |              |     | 22:01      | BO        |            |               | ° 11 . 989          | ° 26 . 388            |              | 302               | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 22:07      | EN        |            |               | ° 11 . 978          | ° 26 . 393            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
| 30           | 38           | 3   | 22:13      | BE        | NET        |               | 49 ° 11 . 922       | 123 ° 26 . 414        |              |                   | -                     |              | NW            | <input type="checkbox"/>            |                  |
|              |              |     | 22:23      | BO        |            |               | ° 11 . 951          | ° 26 . 406            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 22:29      | EN        |            |               | ° 11 . 967          | ° 26 . 400            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
| 31           | 39           | 3   | 23:07      | BE        | ROS        | US            | 49 ° 9 . 787        | 123 ° 32 . 990        | 375          |                   | 66 - 82               | 17           | PC            | <input type="checkbox"/>            |                  |
|              |              |     | 23:14      | BO        |            |               | ° 9 . 799           | ° 33 . 001            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 23:37      | EN        |            |               | ° 9 . 782           | ° 33 . 019            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
| 32           | 40           | 4   | 00:04      | BE        | ROS        |               | 49 ° 8 . 617        | 123 ° 36 . 806        | 147          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> |                  |
|              |              |     | 00:07      | BO        |            |               | ° 8 . 628           | ° 36 . 841            |              | 138               | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 00:09      | EN        |            |               | ° 8 . 640           | ° 36 . 882            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
| 33           | 40           | 4   | 00:16      | BE        | NET        |               | 49 ° 8 . 623        | 123 ° 36 . 805        |              |                   | -                     |              | NW            | <input type="checkbox"/>            |                  |
|              |              |     | 00:20      | BO        |            |               | ° 8 . 647           | ° 36 . 780            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 00:23      | EN        |            |               | ° 8 . 667           | ° 36 . 782            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |
| 34           | 40           | 4   | 00:28      | DE        | DRF        |               | 49 ° 8 . 702        | 123 ° 36 . 709        |              |                   | -                     |              | LP            | <input type="checkbox"/>            | 2 SCT drifters → |
| 35           | GEO 1        | 4   | 01:53      | BE        | NET        |               | 49 ° 15 . 025       | 123 ° 44 . 959        | 402          |                   | -                     |              | NW            | <input type="checkbox"/>            |                  |
|              |              |     | 02:06      | BO        |            |               | ° 15 . 001          | ° 44 . 961            |              | 392               | -                     |              |               | <input type="checkbox"/>            |                  |
|              |              |     | 02:12      | EN        |            |               | ° 15 . 000          | ° 44 . 972            |              |                   | -                     |              |               | <input type="checkbox"/>            |                  |

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 SET = Fish Set

## LOOP = Sea Water Loop

MOR = Mooring  
 NET = Plankton Net Haul  
 DRF = Drifter  
 \_\_\_\_\_ = \_\_\_\_\_

## Bottle Firing Method:

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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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Produced by the Water Properties Group, IOS

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 Version: 6 December 2016

This page is for any notes or observations

810 ; 817

1<sup>st</sup> of 2 nets - one for Hakai

- Vector 1 deployed to take CCA IT tech (Gavin) ashore

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month FEB    |              |     |            | Year 2018 |            |               | Vessel VECTOR       |                       |              | Cruise ID 2018-05 |                       |              |               |                                                              |            |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|--------------|-------------------|-----------------------|--------------|---------------|--------------------------------------------------------------|------------|
| 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   |
| 36           | GEO1         | 4   | 02:19      | BE        | NET        |               | 49°15.009           | 123°44.956            | 402          |                   | -                     |              | NN            | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 02:33      | BO        |            |               | °14.988             | °44.966               |              | 392               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 02:39      | EN        |            |               | °15.000             | °44.939               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
| 37           | GEO1         | 4   | 02:46      | BE        | ROS        | US            | 49°15.000           | 123°44.935            | 402          |                   | 83-85                 | 3            | PC            | <input checked="" type="checkbox"/> <input type="checkbox"/> |            |
|              |              |     | 02:53      | BO        |            |               | °15.000             | °44.915               |              | 399               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 03:02      | EN        |            |               | °15.005             | °44.903               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
| 38           | 26           | 4   | 03:53      | BE        | ROS        |               | 49°14.326           | 123°50.830            | 252          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> <input type="checkbox"/> |            |
|              |              |     | 03:58      | BO        |            |               | °14.285             | °50.940               |              | 251               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 04:03      | EN        |            |               | °14.273             | °50.926               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
| 39           | 265          | 4   | 04:32      | BE        | ROS        |               | 49°16.729           | 123°49.540            | 413          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> <input type="checkbox"/> |            |
|              |              |     | 04:39      | BO        |            |               | °16.727             | °49.559               |              | 405               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 04:46      | EN        |            |               | °16.694             | °49.577               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
| 40           | 27           | 4   | 05:14      | BE        | ROS        | US            | 49°19.095           | 123°48.030            | 345          |                   | 86-102                |              | PC            | <input checked="" type="checkbox"/> <input type="checkbox"/> | note bot 1 |
|              |              |     | 05:20      | BO        |            |               | °19.094             | °48.022               |              | 341               | -                     | 17           |               | <input type="checkbox"/> <input type="checkbox"/>            | empty: see |
|              |              |     | 05:39      | EN        |            |               | °19.094             | °48.029               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | →          |
| 41           | 27           | 4   | 05:40      | DE        | DRF        |               | 49°19.093           | 123°48.029            | 345          |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
| 42           | 275          | 4   | 06:13      | BE        | ROS        |               | 49°21.803           | 123°46.580            | 110          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> <input type="checkbox"/> |            |
|              |              |     | 06:15      | BO        |            |               | °21.815             | °46.589               |              | 101               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |
|              |              |     | 06:17      | EN        |            |               | °21.822             | °46.585               |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |            |

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NET = Plankton Net Haul  
DRF = Drifter

## Bottle Firing Method:

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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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Produced by the Water Properties Group, IOS

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Version: 6 December 2016



- member Vector 1 - fuel - back on program 1935

|         |   |   |     |     |   |    |
|---------|---|---|-----|-----|---|----|
| trigger | 5 | 4 | 3   | 2   | 1 | 24 |
|         | ↓ | ↓ | ↙   | ✓   | ↘ |    |
| bottle  | 5 | 4 | 3   | 2   | 1 | 24 |
|         |   |   |     |     |   |    |
|         |   |   | 300 | 8-5 |   |    |

807 ; 813 ; 820

SC Drifters released at station 27

|        |   |   |   |
|--------|---|---|---|
| holder | 1 | 2 | 3 |
|--------|---|---|---|

- bottle 4-17 okay, no water from depth 250 m  
bot 1 empty  
bot 2 = 341 m  
bot 3 = 300 m

- due to not being set properly after previous 3 bottle cast

# DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

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| Month <u>FEB</u> |              |     | Year <u>2018-05</u> |           |            | Vessel <u>VECTOR</u> |                     |                       | Cruise ID <u>2018-05</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      |
| 43               | 28           | 4   | 06:43               | BE        | ROS        |                      | 49° 24.089          | 123° 45.260           | 134                      |                   | -                     |              | RE            | <input checked="" type="checkbox"/> |               |
|                  |              |     | 06:46               | BO        |            |                      | ° 24.088            | ° 45.258              |                          | 129               | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 06:49               | EN        |            |                      | ° 24.092            | ° 45.271              |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
| 44               | 28           | 4   | 06:53               | BE        | NET        |                      | 49° 24.099          | 123° 45.278           | 135                      |                   | -                     |              | NN            | <input type="checkbox"/>            |               |
|                  |              |     | 06:49               | BO        |            |                      | ° 24.095            | ° 45.290              |                          | 125               | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 07:00               | EN        |            |                      | ° 24.087            | ° 45.293              |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
| 45               | 24           | 4   | 08:51               | BE        | NET        |                      | 49° 30.304          | 124° 5.966            | 423                      |                   | -                     |              | CW/MB         | <input type="checkbox"/>            |               |
|                  |              |     | 09:07               | BO        |            |                      | ° 30.307            | ° 5.974               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 09:14               | EN        |            |                      | ° 30.303            | ° 5.975               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
| 46               | 24           | 4   | 09:24               | BE        | ROS        |                      | 49° 30.311          | 124° 5.966            | 425                      |                   | -                     |              | SR            | <input checked="" type="checkbox"/> |               |
|                  |              |     | 09:32               | BO        |            |                      | ° 30.314            | ° 5.948               |                          | 421               | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 09:38               | EN        |            |                      | ° 30.313            | ° 5.993               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
| 47               | 25           | 4   | 10:07               | BE        | ROS        |                      | 49° 27.697          | 124° 7.555            | 312                      |                   | -                     |              | SR            | <input checked="" type="checkbox"/> | Deck pressure |
|                  |              |     | 10:13               | BO        |            |                      | ° 27.704            | ° 7.621               |                          | 307               | -                     |              |               | <input type="checkbox"/>            | reading -0.03 |
|                  |              |     | 10:18               | EN        |            |                      | ° 27.689            | ° 7.619               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
| 48               | 2            |     | 10:56               | BE        | ROS        |                      | 49° 24.077          | 124° 9.272            | 27                       |                   | -                     |              | SR            | <input checked="" type="checkbox"/> |               |
|                  |              |     | 11:02               | BO        |            |                      | ° 24.113            | ° 9.306               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 11:23               | EN        |            |                      | ° 24.115            | ° 9.348               |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | :                   |           |            |                      | °                   | °                     |                          |                   | -                     |              |               | <input type="checkbox"/>            |               |

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=

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### Notes:

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Version: 6 December 2016

# DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

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| Month <u>Feb</u> |              |     |            | Year <u>2018</u> |            |               | Vessel <u>Vector</u>   |             |              | Cruise ID <u>2018-05</u> |                       |              |               |                                     |               |
|------------------|--------------|-----|------------|------------------|------------|---------------|------------------------|-------------|--------------|--------------------------|-----------------------|--------------|---------------|-------------------------------------|---------------|
| Event Number     | Station Name | Day | Time (UTC) | Time Code        | Event Type | Firing Method | Positional Information |             | Bottom Depth | Max Cast Pressure        | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/FI Cleaned                     | Comments      |
|                  |              |     |            |                  |            |               | Latitude               | Longitude   |              |                          |                       |              |               |                                     |               |
| 49               | CPF1         | 4   | 12:12      | BE               | NET        |               | 49° 22.019             | 124° 05.130 | 242          |                          | -                     | -            | CW/MB         | <input type="checkbox"/>            |               |
|                  |              |     | 12:21      | BO               |            |               | ° 22.017               | ° 05.110    |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 12:25      | EN               |            |               | ° 22.009               | ° 05.109    |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
| 50               | CPF1         | 4   | 12:34      | BE               | ROS        | US            | 49° 22.018             | 124° 5.105  | 246          |                          | 118-120               | 3            | SR            | <input checked="" type="checkbox"/> |               |
|                  |              |     | 12:38      | BO               |            |               | ° 22.020               | ° 5.100     |              | 241                      | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 12:45      | EN               |            |               | ° 22.020               | ° 5.095     |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
| 51               | 1            | 4   | 13:25      | BE               | ROS        |               | 49° 20.322             | 124° 12.107 | 248          |                          | -                     | -            | SR            | <input type="checkbox"/>            |               |
|                  |              |     | 13:30      | BO               |            |               | ° 20.320               | ° 12.108    |              | 243                      | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 13:34      | EN               |            |               | ° 20.314               | ° 12.108    |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
| 52               | 4            | 4   | 14:36      | BE               | ROS        |               | 49° 24.512             | 124° 22.106 | 344          |                          | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 14:42      | BO               |            |               | ° 24.497               | ° 22.091    |              | 341                      | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 14:48      | EN               |            |               | ° 24.497               | ° 22.084    |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
| 53               | 3            | 4   | 15:14      | BE               | ROS        | US            | 49° 26.630             | 124° 20.210 | 323          |                          | 121-136               | 16           | SR            | <input checked="" type="checkbox"/> | went from 100 |
|                  |              |     | 15:21      | BO               |            |               | ° 26.624               | ° 20.224    |              | 318                      | -                     |              |               | <input type="checkbox"/>            | backdown to   |
|                  |              |     | 15:        | EN               |            |               | ° 26.                  | ° 20.       |              |                          | -                     |              |               | <input type="checkbox"/>            | 125 for bot 7 |
| 54               | CPF2         | 4   | 17:01      | BE               |            |               | 49° 28.006             | 124° 29.940 | 328          |                          | -                     | -            | SR            | <input checked="" type="checkbox"/> |               |
|                  |              |     | 17:07      | BO               |            |               | ° 27.998               | ° 29.952    |              | 324                      | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | 17:13      | EN               |            |               | ° 27.985               | ° 29.933    |              |                          | -                     |              |               | <input type="checkbox"/>            |               |
|                  |              |     | :          |                  |            |               | °                      | °           |              |                          | -                     |              |               | <input type="checkbox"/>            |               |

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### Notes:

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- ① The 300 m bottle was missed. To maintain Ruskin # vs. sample # - tripped 2 @ 125 m and discarded bottle 6, and reassigned depths (omitting 300m)
- ② Bottle #1 did not fire



# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month <u>Feb</u> |              |     |            | Year <u>2018</u> |            |               | Vessel <u>Vector</u> |                       |              | Cruise ID <u>2018-05</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       |
| 55               | CPF2         | 4   | 17:18      | BE               | NET        |               | 49°28.000            | 124°29.929            | 325          |                          | -                     |              | CW/MB         | <input type="checkbox"/>            |                |
|                  |              |     | 17:29      | BO               |            |               | °28.002              | °29.917               |              | 310                      | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 17:35      | EN               |            |               | °28.004              | °29.907               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |
| 56               | BS17         | 4   | 18:47      | BE               | NET        |               | 49°28.997            | 124°45.982            | 60           |                          | -                     |              | CW/MB         | <input type="checkbox"/>            |                |
|                  |              |     | 18:48      | BO               |            |               | °28.996              | °45.983               |              | 50                       | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 18:49      | EN               |            |               | °28.997              | °45.984               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |
| 57               | BS17         | 4   | 18:58      | BE               | ROS        | US            | 49°29.002            | 124°45.985            | 63           |                          | 137-144               | 8            | SR            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 18:59      | BO               |            |               | °29.000              | °45.989               |              | 59                       | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 19:07      | EN               |            |               | °28.999              | °45.995               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |
| 58               | 6            | 4   | 20:29      | BE               | ROS        | US            | 49°30.592            | 124°27.826            | 192          |                          | 145-157               | 13           | PC            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 20:32      | BO               |            |               | °30.598              | °27.814               |              | 187                      | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 20:44      | EN               |            |               | °30.618              | °27.827               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |
| 59               | 6            | 4   | 20:45      | DE               | DRF        |               | 49°30.618            | 124°27.832            | 192          |                          | -                     |              | SR            | <input type="checkbox"/>            | 3 SOT drifters |
| 60               | 7            | 4   | 21:20      | BE               | ROS        |               | 49°34.392            | 124°24.206            | 349          |                          | -                     |              | PC            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 21:26      | BO               |            |               | °34.386              | °24.203               |              | 345                      | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 21:31      | EN               |            |               | °34.384              | °24.200               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |
| 61               | 8            | 4   | 22:24      | BE               | ROS        |               | 49°39.290            | 124°33.048            | 336          |                          | -                     |              | PC            | <input checked="" type="checkbox"/> |                |
|                  |              |     | 22:30      | BO               |            |               | °39.270              | °33.074               |              | 331                      | -                     |              |               | <input type="checkbox"/>            |                |
|                  |              |     | 22:35      | EN               |            |               | °39.301              | °33.006               |              |                          | -                     |              |               | <input type="checkbox"/>            |                |

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Notes:

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*This page is for any notes or observations*

822 ; 795 ; 804

## DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

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| Month        |              |     |            | FEB       |            | Year          |                        | 2018        |              | Vessel            |                       | VECTOR       |               | Cruise ID                                                    |             | 2018-05 |  |
|--------------|--------------|-----|------------|-----------|------------|---------------|------------------------|-------------|--------------|-------------------|-----------------------|--------------|---------------|--------------------------------------------------------------|-------------|---------|--|
| Event Number | Station Name | Day | Time (UTC) | Time Code | Event Type | Firing Method | Positional Information |             | Bottom Depth | Max Cast Pressure | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/FI Cleaned                                              | Comments    |         |  |
|              |              |     |            |           |            |               | Latitude               | Longitude   |              |                   |                       |              |               |                                                              |             |         |  |
| 62           | 9            | 4   | 23:12      | BE        | ROS        | US            | 49° 35.490             | 124° 38.262 | 168          |                   | 158 - 169             | 12           | RC            | <input checked="" type="checkbox"/> <input type="checkbox"/> | foggy       |         |  |
|              |              |     | 23:15      | BO        |            |               | ° 35.468               | ° 38.297    |              | 162               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 23:25      | EN        |            |               | ° 35.491               | ° 38.329    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
| 63           | 10           | 5   | 00:22      | BE        | ROS        |               | 49° 40.686             | 124° 47.270 | 91           |                   | -                     |              | RC            | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 00:23      | BO        |            |               | ° 40.693               | ° 47.274    |              | 91                | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 00:25      | EN        |            |               | ° 40.698               | ° 47.272    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
| 64           | 11           | 5   | 00:51      | BE        | ROS        |               | 49° 42.421             | 124° 43.411 | 300          |                   | -                     |              | RC            | <input checked="" type="checkbox"/> <input type="checkbox"/> |             |         |  |
|              |              |     | 00:56      | BO        |            |               | ° 42.419               | ° 43.412    |              | 294               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 01:00      | EN        |            |               | ° 42.416               | ° 43.404    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
| 65           | 11           | 5   | 01:05      | BE        | NET        |               | 49° 42.416             | 124° 43.407 | 300          |                   | -                     |              | NN            | <input type="checkbox"/> <input type="checkbox"/>            | fog lifts   |         |  |
|              |              |     | 01:13      | BO        |            |               | ° 42.411               | ° 43.398    |              | 290               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 01:17      | EN        |            |               | ° 42.410               | ° 43.405    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
| 66           | 12           | 5   | 02:03      | BE        | NET        |               | 49° 43.566             | 124° 40.728 | 355          |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | switch nets |         |  |
|              |              |     | 02:12      | BO        |            |               | ° 43.578               | ° 40.773    |              | 345               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | hole in one |         |  |
|              |              |     | 02:17      | EN        |            |               | ° 43.577               | ° 40.786    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
| 67           | 12           | 5   | 02:26      | BE        | ROS        | US            | 49° 43.588             | 124° 40.692 | 357          |                   | 170 - 186             | 17           |               | <input checked="" type="checkbox"/> <input type="checkbox"/> |             |         |  |
|              |              |     | 02:33      | BO        |            |               | ° 43.578               | ° 40.723    |              | 350               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | 02:47      | EN        |            |               | ° 43.554               | ° 40.822    |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |
|              |              |     | :          |           |            |               | °                      | °           |              |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |             |         |  |

## Event Type:

BOT = Bottle cast (no CTD)  
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 ROS = CTD in Rosette  
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 NET = Plankton Net Haul  
 DRF = Drifter

## Bottle Firing Method:

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Notes:

## Time Code:

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| Month FEB    |              |     |            | Year 2018 |            |               | Vessel VECTOR       |                       |              | Cruise ID 2018-05 |                       |              |               |                                     |           |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|--------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|-----------|
| 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  |
| 68           | 13           | 5   | 04:32      | BE        | ROS        |               | 49° 55.292          | 124° 55.178           | 233          |                   | -                     |              | PC            | <input checked="" type="checkbox"/> |           |
|              |              |     | 04:36      | BO        |            |               | ° 55.264            | ° 55.154              |              | 235               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 04:39      | EN        |            |               | ° 55.246            | ° 55.182              |              |                   | -                     |              |               | <input type="checkbox"/>            |           |
| 69           | 14           | 5   | 05:13      | BE        | NET        |               | 49° 53.021          | 124° 59.579           | 315          |                   | -                     |              | NN            | <input type="checkbox"/>            |           |
|              |              |     | 05:22      | BO        |            |               | ° 52.995            | ° 59.625              |              | 305               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 05:26      | EN        |            |               | ° 52.990            | ° 59.650              |              |                   | -                     |              |               | <input type="checkbox"/>            |           |
| 70           | 14           | 5   | 05:31      | BE        | NET        |               | 49° 52.995          | 124° 59.640           | 315          |                   | -                     |              | NN            | <input type="checkbox"/>            |           |
|              |              |     | 05:39      | BO        |            |               | ° 53.011            | ° 59.655              |              | 305               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 05:41      | EN        |            |               | ° 53.023            | ° 59.621              |              |                   | -                     |              |               | <input type="checkbox"/>            |           |
| 71           | 14           | 5   | 05:52      | BE        | ROS        | US            | 49° 53.014          | 124° 59.598           | 315          |                   | 187-201               | 15           | PC            | <input checked="" type="checkbox"/> |           |
|              |              |     | 05:57      | BO        |            |               | ° 53.008            | ° 59.590              |              | 310               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 06:13      | EN        |            |               | ° 53.026            | ° 59.561              |              |                   | -                     |              |               | <input type="checkbox"/>            |           |
| 72           | 14           | 5   | 06:14      | DE        | DRF        |               | 49° 53.010          | 124° 59.558           |              |                   | -                     |              |               | <input type="checkbox"/>            | 812 ; 806 |
| 73           | 15           | 5   | 06:41      | BE        | ROS        |               | 49° 51.589          | 125° 01.616           | 128          |                   | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 06:43      | BO        |            |               | ° 51.588            | ° 01.627              |              | 122               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 06:45      | EN        |            |               | ° 51.593            | ° 01.633              |              |                   | -                     |              |               | <input type="checkbox"/>            |           |
| 74           | QU 39        | 5   | 07:55      | BE        | ROS        | US            | 50° 1.844           | 125° 5.502            | 273          |                   | 202-204               | 3            |               | <input checked="" type="checkbox"/> |           |
|              |              |     | 08:00      | BO        |            |               | ° 1.858             | ° 5.496               |              | 268               | -                     |              |               | <input type="checkbox"/>            |           |
|              |              |     | 08:07      | EN        |            |               | ° 1.864             | ° 5.470               |              |                   | -                     |              |               | <input type="checkbox"/>            |           |

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 =

## Bottle Firing Method:

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 DN = Down / No stop

## Notes:

## Time Code:

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| Month <i>Feb</i> |              |     | Year <i>2018</i> |           |            | Vessel <i>Vector</i> |                     |                       | Cruise ID <i>2018-05</i> |                   |                       |              |               |                                     |                   |
|------------------|--------------|-----|------------------|-----------|------------|----------------------|---------------------|-----------------------|--------------------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|-------------------|
| 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          |
| 75               | 16           | 5   | 08:44            | BE        | ROS        | US                   | 49° 57.714          | 125° 8.771            | 154                      |                   | 205-215               | 11           | SR            | <input checked="" type="checkbox"/> | Deck pressure     |
|                  |              |     | 08:48            | BO        |            |                      | ° 57.715            | ° 8.764               |                          | 150               | -                     |              |               | <input type="checkbox"/>            | of 0.01 db        |
|                  |              |     | 09:00            | EN        |            |                      | ° 57.712            | ° 8.789               |                          |                   | -                     |              |               | <input type="checkbox"/>            | to -0.04 db       |
| 76               | 21           | 5   | 09:39            | BE        | ROS        |                      | 50° 2.014           | 125° 13.580           |                          |                   | -                     |              | SR            | <input checked="" type="checkbox"/> |                   |
|                  |              |     | 09:40            | BO        |            |                      | ° 2.023             | ° 13.574              | 83                       |                   | -                     |              |               | <input type="checkbox"/>            |                   |
|                  |              |     | 09:42            | EN        |            |                      | ° 2.029             | ° 13.566              |                          | 78                | -                     |              |               | <input type="checkbox"/>            |                   |
| 77               | 17           | 5   | 10:44            | BE        | ROS        |                      | 49° 58.799          | 125° 4.298            | 265                      |                   | -                     |              | SR            | <input checked="" type="checkbox"/> |                   |
|                  |              |     | 10:49            | BO        |            |                      | ° 58.801            | ° 4.300               |                          | 260               | -                     |              |               | <input type="checkbox"/>            |                   |
|                  |              |     | 10:53            | EN        |            |                      | ° 58.800            | ° 4.302               |                          |                   | -                     |              |               | <input type="checkbox"/>            |                   |
| 78               | 18           | 5   | 11:23            | BE        | ROS        |                      | 49° 59.198          | 124° 59.890           | 145                      |                   | -                     |              | SR            | <input checked="" type="checkbox"/> | Bottle 1 fired by |
|                  |              |     | 11:25            | BO        |            |                      | ° 59.203            | ° 59.900              |                          | 142               | -                     |              |               | <input type="checkbox"/>            | accident.         |
|                  |              |     | 11:27            | EN        |            |                      | ° 59.203            | ° 59.904              |                          |                   | -                     |              |               | <input type="checkbox"/>            |                   |
| 79               | 19           | 5   | 12:05            | BE        |            |                      | 50° 1.207           | 124° 52.849           | 277                      |                   | -                     |              |               | <input type="checkbox"/>            |                   |
|                  |              |     | 12:11            | BO        |            |                      | ° 1.216             | ° 52.860              |                          | 274               | -                     |              |               | <input type="checkbox"/>            |                   |
|                  |              |     | 12:15            | EN        |            |                      | ° 1.211             | ° 52.858              |                          |                   | -                     |              |               | <input type="checkbox"/>            |                   |
| 80               | 12ish        | 5   | 14:40            | BE        | DRF        |                      | 49° 44.034          | 124° 41.176           | 358                      | 0                 | -                     |              | SR            | <input type="checkbox"/>            | 792, 799          |
| 81               | 20           | 5   | 16:54            | BE        | CTD        |                      | 49° 47.192          | 124° 32.311           |                          |                   | -                     |              |               | <input type="checkbox"/>            | 25-404            |
|                  |              |     | 17:01            | BO        |            |                      | ° 47.193            | ° 32.303              |                          |                   | -                     |              |               | <input type="checkbox"/>            | used of the       |
|                  |              |     | 17:08            | EN        |            |                      | ° 47.200            | ° 32.298              |                          |                   | -                     |              |               | <input type="checkbox"/>            | S. side           |

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Notes:

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STN 16 Bottle 11 did not fire - took HPLC from Bottle 9 which was the next.  
closets next chl sample.

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| Month <u>Feb</u> |              |     | Year <u>2018</u> |           |            | Vessel <u>Vector</u> |                        |             | Cruise ID <u>2018-05</u> |                   |                       |              |               |                                     |          |
|------------------|--------------|-----|------------------|-----------|------------|----------------------|------------------------|-------------|--------------------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|----------|
| Event Number     | Station Name | Day | Time (UTC)       | Time Code | Event Type | Firing Method        | Positional Information |             | Bottom Depth             | Max Cast Pressure | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/FI Cleaned                     | Comments |
| 82               | 20           | 5   | 17:16            | BE        | ROS        |                      | 49° 47.204             | 124° 32.258 | 313                      |                   |                       |              | SR            | <input checked="" type="checkbox"/> |          |
|                  |              |     | 17:22            | BO        |            |                      | ° 47.203               | ° 32.284    |                          | 309               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 17:27            | EN        |            |                      | ° 47.198               | ° 32.290    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 83               | 22           | 5   | 18:50            | BE        | ROS        |                      | 49° 40.184             | 124° 16.330 | 356                      |                   | 216-218               | 3            | SR            | <input checked="" type="checkbox"/> |          |
|                  |              |     | 18:56            | BO        |            |                      | ° 40.181               | ° 16.324    |                          | 352               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 19:04            | EN        |            |                      | ° 40.177               | ° 16.327    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 84               | 22           | 5   | 19:13            | BE        | NET        |                      | 49° 40.176             | 124° 16.330 | 356                      |                   | -                     |              | CW/MB         | <input type="checkbox"/>            |          |
|                  |              |     | 19:26            | BO        |            |                      | ° 40.164               | ° 16.314    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 19:33            | EN        |            |                      | ° 40.152               | ° 16.317    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 85               | 22           | 5   | 19:34            | BE        | NET        |                      | 49° 40.154             | 124° 16.297 | 356                      |                   | -                     |              | OW/MB         | <input type="checkbox"/>            |          |
|                  |              |     | 19:50            | BO        |            |                      | ° 40.156               | ° 16.283    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 19:57            | EN        |            |                      | ° 40.160               | ° 16.284    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 86               | 25           | 5   | 22:43            | BE        | ROS        |                      | 49° 24.082             | 123° 45.244 | 134                      |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 22:46            | BO        |            |                      | ° 24.072               | ° 45.241    |                          | 130               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 22:48            | EN        |            |                      | ° 24.071               | ° 45.240    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 87               | 275          | 5   | 23:12            | BE        |            |                      | 49° 21.798             | 123° 46.560 | 102                      |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 23:14            | BO        |            |                      | ° 21.808               | ° 46.568    |                          | 101               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 23:15            | EN        |            |                      | ° 21.812               | ° 46.572    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | :                |           |            |                      | °                      | °           |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |

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| Month <u>FEB</u> |              |     | Year <u>2018</u> |           |            | Vessel <u>VECTOR</u> |                        |             | Cruise ID <u>2018-05</u> |                   |                       |              |               |                                     |          |
|------------------|--------------|-----|------------------|-----------|------------|----------------------|------------------------|-------------|--------------------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|----------|
| Event Number     | Station Name | Day | Time (UTC)       | Time Code | Event Type | Firing Method        | Positional Information |             | Bottom Depth             | Max Cast Pressure | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/FI Cleaned                     | Comments |
|                  |              |     |                  |           |            |                      | Latitude               | Longitude   |                          |                   |                       |              |               |                                     |          |
| 88               | 27           | 5   | 23:42            | BE        | ROS        |                      | 49° 19.086             | 123° 48.002 | 342                      |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 23:48            | BO        |            |                      | ° 19.081               | ° 48.017    |                          | 341               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 23:53            | EN        |            |                      | ° 19.082               | ° 48.023    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 89               | 265          | 6   | 00:18            | BE        | ROS        |                      | 49° 16.690             | 123° 49.476 | 408                      |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 00:24            | BO        |            |                      | ° 16.685               | ° 49.470    |                          | 405               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 00:31            | EN        |            |                      | ° 16.696               | ° 49.486    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 90               | 26           | 6   | 00:54            | BE        | ROS        |                      | 49° 14.294             | 123° 50.772 | 254                      |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 00:58            | BO        |            |                      | ° 14.282               | ° 50.770    |                          | 242               | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 01:02            | EN        |            |                      | ° 14.291               | ° 50.758    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 91               | VAN3         | 6   | 03:44            | BE        | ROS        |                      | 49° 18.910             | 123° 10.027 | 38                       |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 03:45            | BO        |            |                      | ° 18.918               | ° 10.034    |                          | 35                | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 03:46            | EN        |            |                      | ° 18.922               | ° 10.034    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 92               | VAN2         | 6   | 04:09            | BE        | ROS        |                      | 49° 19.501             | 123° 13.788 | 66                       |                   | -                     |              | R             | <input checked="" type="checkbox"/> |          |
|                  |              |     | 04:10            | BO        |            |                      | ° 19.504               | ° 13.784    |                          | 62                | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 04:11            | EN        |            |                      | ° 19.506               | ° 13.786    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
| 93               | VANO         | 6   | 04:33            | BE        |            |                      | 49° 17.812             | 123° 13.776 | 49                       |                   | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 04:34            | BO        |            |                      | ° 17.803               | ° 13.770    |                          | 44                | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | 04:35            | EN        |            |                      | ° 17.800               | ° 17.768    |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |
|                  |              |     | :                |           |            |                      | °                      | °           |                          |                   | -                     |              |               | <input type="checkbox"/>            |          |

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| Month FEB    |              |     | Year 2018  |           |            | Vessel VECTOR |                     |                       | Cruise ID 2018-05 |                   |                       |              |               |                                     |                |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|-------------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|----------------|
| 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       |
| 94           | VAN1         | 6   | 04:54      | BE        | NET        |               | 49° 18.898          | 123° 15.896           | 115               |                   | -                     |              |               | <input type="checkbox"/>            |                |
|              |              |     | 04:58      | BO        |            |               | ° 18.903            | ° 15.886              |                   | 105               | -                     |              |               | <input type="checkbox"/>            |                |
|              |              |     | 05:00      | EN        |            |               | ° 18.898            | ° 15.881              |                   |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 95           | VAN1         | 6   | 05:07      | BE        | ROS        | US            | 49° 18.902          | 123° 15.877           | 115               |                   | 219-229               | 11           | RC            | <input checked="" type="checkbox"/> |                |
|              |              |     | 05:09      | BO        |            |               | ° 18.905            | ° 15.881              |                   | 109               | -                     |              |               | <input type="checkbox"/>            | anchor in      |
|              |              |     | 05:18      | EN        |            |               | ° 18.913            | ° 15.870              |                   |                   | -                     |              |               | <input type="checkbox"/>            | English Bay    |
| 96           | VAN4         | 6   | 15:42      | BE        | ROS        | US            | 49° 17.911          | 123° 5.797            | 59                |                   | 230-237               | 8            | SR            | <input checked="" type="checkbox"/> |                |
|              |              |     | 15:44      | BO        |            |               | ° 17.918            | ° 5.794               |                   | 55                | -                     |              |               | <input type="checkbox"/>            |                |
|              |              |     | 15:52      | EN        |            |               | ° 17.914            | ° 5.788               |                   |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 97           | Van 5        | 6   | 16:23      | BE        | ROS        | US            | 49° 17.713          | 123° 3.332            | 37                |                   | 238-244               | 7            | SR            | <input checked="" type="checkbox"/> |                |
|              |              |     | 16:25      | BO        |            |               | ° 17.712            | ° 3.334               |                   | 33                | -                     |              |               | <input type="checkbox"/>            |                |
|              |              |     | 16:30      | EN        |            |               | ° 17.708            | ° 3.326               |                   |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 98           | Van 5        | 6   | 16:32      | BE/BO     | ROS        | US            | 49° 17.708          | 123° 3.326            | 37                | 2                 | 244-244               |              |               | <input type="checkbox"/>            | 98 was just to |
| 99           | VAN6         | 6   | 17:28      | BE        | NET        |               | 49° 17.940          | 122° 58.917           | 59                |                   |                       |              | CR/MR         | <input type="checkbox"/>            | Fire bot 7     |
|              |              |     | 17:30      | BO        |            |               | 49° 17.946          | 122° 58.937           |                   | 51                | -                     |              |               | <input type="checkbox"/>            | for event 97   |
|              |              |     | 17:31      | EN        |            |               | 49° 17.952          | 122° 58.947           |                   |                   | -                     |              |               | <input type="checkbox"/>            |                |
| 100          | Van 6        | 6   | 17:38      | BE        | ROS        | US            | 49° 17.956          | 122° 58.987           | 52                |                   | 245-252               | 8            | SR            | <input checked="" type="checkbox"/> |                |
|              |              |     | 17:40      | BO        |            |               | ° 17.948            | ° 59.000              |                   | 49                | -                     |              |               | <input type="checkbox"/>            |                |
|              |              |     | 17:47      | EN        |            |               | ° 17.932            | ° 59.047              |                   |                   | -                     |              |               | <input type="checkbox"/>            |                |

## Event Type:

BOT = Bottle cast (no CTD)  
 CTD = Standalone CTD  
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LOOP = Sea Water Loop  
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 NET = Plankton Net Haul  
 DRF = Drifter

## Bottle Firing Method:

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 UN = Up / No stop  
 DN = Down / No stop

## 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

DE = Deployment Time  
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 RE = Recover Mooring Time

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Notes:

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Visitors onboard Paul Covert, Hilary Wyland, Shauna Michelek  
Tsileil, Wantu

## DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences

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| Month <u>Feb</u> |              |     | Year <u>2018</u> |           |            | Vessel <u>Vecur</u> |                        |             | Cruise ID <u>2018-05</u> |                   |                       |              |               |                                     |                             |
|------------------|--------------|-----|------------------|-----------|------------|---------------------|------------------------|-------------|--------------------------|-------------------|-----------------------|--------------|---------------|-------------------------------------|-----------------------------|
| Event Number     | Station Name | Day | Time (UTC)       | Time Code | Event Type | Firing Method       | Positional Information |             | Bottom Depth             | Max Cast Pressure | Sample Serial Numbers | # of Bottles | Watch Keepers | Trns/FI Cleaned                     | Comments                    |
| 101              | IND1         | 6   | 18:32            | BE        | ROS        |                     | 49° 19.902             | 122° 54.193 | 76                       |                   |                       |              | SR            | <input checked="" type="checkbox"/> |                             |
|                  |              |     | 18:34            | BO        |            |                     | ° 19.903               | ° 54.192    |                          | 71                | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 18:35            | EN        |            |                     | ° 19.904               | ° 54.191    |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |
| 102              | IND3         | 6   | 19:59            | BE        | ROS        |                     | 49° 22.189             | 122° 52.921 | 198                      |                   | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 19:02            | BO        |            |                     | ° 22.189               | ° 52.938    |                          | 174               | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 19:06            | EN        |            |                     | ° 22.188               | ° 52.940    |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |
| 103              | IND5         | 6   | 19:28            | BE        | ROS        |                     | 49° 24.698             | 122° 52.297 | 208                      |                   |                       |              | SR            | <input checked="" type="checkbox"/> |                             |
|                  |              |     | 19:32            | BO        |            |                     | ° 24.698               | ° 52.290    |                          | 205               | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 19:36            | EN        |            |                     | ° 24.702               | ° 52.288    |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |
| 104              | IND8         | 6   | 20:09            | BE        | ROS        | US                  | 49° 26.507             | 122° 52.600 | 37                       |                   | 260 - 267             | 8            | PC            | <input checked="" type="checkbox"/> | Sample numbers out of order |
|                  |              |     | 20:11            | BO        |            |                     | ° 26.507               | ° 52.600    |                          | 36                | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 20:15            | EN        |            |                     | ° 26.502               | ° 52.592    |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |
| 105              | IND6         | 6   | 20:43            | BE        | ROS        |                     | 49° 26.407             | 122° 51.628 | 100                      |                   |                       |              | PC            | <input checked="" type="checkbox"/> |                             |
|                  |              |     | 20:44            | BO        |            |                     | ° 26.407               | ° 51.630    |                          | 96                | -                     |              |               | <input type="checkbox"/>            |                             |
|                  |              |     | 20:46            | EN        |            |                     | ° 26.406               | ° 51.629    |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |
| 106              | IND7         | 6   | 21:07            | BE        | ROS        |                     | 49° 27.392             | 122° 52.679 | 75                       |                   | 253 - 259             | 9            | PC            | <input type="checkbox"/>            | Sample numbers out of order |
|                  |              |     | 21:09            | BO        |            |                     | ° 27.389               | ° 52.679    |                          | 70                | 268 - 269             |              |               | <input type="checkbox"/>            | chd - phytos out            |
|                  |              |     | 21:16            | EN        |            |                     | ° 27.379               | ° 52.684    |                          |                   | -                     |              |               | <input type="checkbox"/>            | of bottle 7                 |
|                  |              |     | :                |           |            |                     | °                      | °           |                          |                   | -                     |              |               | <input type="checkbox"/>            |                             |

## Event Type:

BOT = Bottle cast (no CTD)  
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## 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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Notes:

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| Month FEB    |              |     | Year 2018  |           |            | Vessel VECTOR |                     |                       | Cruise ID 2018-05 |                   |                       |              |               |                                                              |                |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|-------------------|-------------------|-----------------------|--------------|---------------|--------------------------------------------------------------|----------------|
| 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       |
| 107          | IND4         | 6   | 21:54      | BE        | NET        |               | 49°23.319           | 122°52.512            | 221               |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 22:00      | BO        |            |               | °23.330             | °52.500               |                   | 211               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 22:03      | EN        |            |               | °23.326             | °52.513               |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
| 108          | IND4         | 6   | 22:12      | BE        | ROS        | US            | 49°23.212           | 122°52.508            | 221               |                   | 270-284               | 15           |               | <input checked="" type="checkbox"/> <input type="checkbox"/> |                |
|              |              |     | 22:15      | BO        |            |               | °23.312             | °52.499               |                   | 215               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 22:28      | EN        |            |               | °23.332             | °52.494               |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
| 109          | IND2         | 6   | 23:30      | BE        | ROS        | US            | 49°20.981           | 122°54.102            | 158               |                   | 285-295               | 11           |               | <input checked="" type="checkbox"/> <input type="checkbox"/> |                |
|              |              |     | 23:33      | BO        |            |               | °20.981             | °54.089               |                   | 155               | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 23:43      | EN        |            |               | °20.987             | °54.118               |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
| 110          | VAN7         | 7   | 00:35      | BE        | ROS        | US            | 49°17.689           | 122°53.519            | 14                |                   | 296-300               | 5            |               | <input type="checkbox"/> <input type="checkbox"/>            | visitors away  |
|              |              |     | 00:36      | BO        |            |               | °17.699             | °53.514               |                   | 10.9              | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 00:39      | EN        |            |               | °17.698             | °53.515               |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
| 111          | INDO         | 7   | 01:53      | BE        | ROS        | US            | 49°18.288           | 122°56.456            | 35                |                   | 301-307               | 7            |               | <input checked="" type="checkbox"/> <input type="checkbox"/> |                |
|              |              |     | 01:54      | BO        |            |               | ° .289              | ° .450                |                   | 31                | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |
|              |              |     | 01:58      | EN        |            |               | ° .295              | ° .444                |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | DEKano         |
| 112          | PEI-N        | 7   | 17:24      | BO        | COR        |               | 49°20.190           | 123°13.722            | 33                |                   |                       |              | CW            | <input type="checkbox"/> <input type="checkbox"/>            | Chris Martin   |
| 113          | GVRD3-2      | 7   | 21:48      | BO        | COR        |               | 49°12.469           | 123°18.009            | 84                |                   | -                     |              | CW            | <input type="checkbox"/> <input type="checkbox"/>            | Metho Van mbra |
| 114          | 107          | 7   | 23:50      | DE        | DRF        |               | 48°58.056           | 123°17.901            | 177               |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            | 797; 805; 807  |
|              |              |     | :          |           |            |               | ° .                 | ° .                   |                   |                   | -                     |              |               | <input type="checkbox"/> <input type="checkbox"/>            |                |

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 COR = ~~BOX~~ CORE

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Hillary Hyland - hhyland@twonation.ca

Shawana Michael - smichael@twonation.ca

*This page is for any notes or observations*

- Chris Martin away @ 12:30

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month FEB    |              |     | Year 2018  |           |            | Vessel NECTAR |                     |                       | Cruise ID 2018 05 |                   |                       |              |               |                          |             |
|--------------|--------------|-----|------------|-----------|------------|---------------|---------------------|-----------------------|-------------------|-------------------|-----------------------|--------------|---------------|--------------------------|-------------|
| 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    |
| 115          | G101         | 8   | 01:37      | BE        | NET        |               | 48° 45.852          | 123° 20.533           | 65                |                   |                       |              | NN/MB         | <input type="checkbox"/> |             |
|              |              |     | 01:39      | BO        |            |               | ° 45.835            | ° 20.534              |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | 01:41      | EN        |            |               | ° 45.827            | ° 20.536              |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
| 116          | G101         | 8   | 01:47      | BE        | CTD        |               | 48° 45.832          | 123° 20.513           | 65                |                   |                       |              | SR            | <input type="checkbox"/> | CTD 25-404  |
|              |              |     | 01:48      | BO        |            |               | ° 45.836            | ° 20.509              |                   |                   | -                     |              |               | <input type="checkbox"/> | used of the |
|              |              |     | 01:49      | EN        |            |               | ° 45.834            | ° 20.502              |                   |                   | -                     |              |               | <input type="checkbox"/> | side        |
| 117          | SC-04        | 8   | 02:17      | BE        | NET        |               | 48° 43.507          | 123° 25.035           | 94                |                   |                       |              |               | <input type="checkbox"/> |             |
|              |              |     | 02:20      | BO        |            |               | ° 43.485            | ° 25.091              |                   | 84                | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | 02:22      | EN        |            |               | ° 43.473            | ° 25.078              |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
| 118          | SC-04        | 8   | 02:29      | BE        | CTD        |               | 48° 43.474          | 123° 25.007           | 94                |                   |                       |              |               | <input type="checkbox"/> |             |
|              |              |     | 02:30      | BO        |            |               | ° 43.477            | ° 25.988              |                   | 84                | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | 02:32      | EN        |            |               | ° 43.479            | ° 25.953              |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |
|              |              |     | :          |           |            |               | °                   | °                     |                   |                   | -                     |              |               | <input type="checkbox"/> |             |

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program complete ; steam for Port Bay alongside 19:42