

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: SI Event #: 2 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 12 | JUN | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |   |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|---|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl a |   |  |  |  |  |  |  |  |  |          |
| 1                 |          | 1        | 100               | ✓ 100                | X   | X   |     |       | X |  |  |  |  |  |  |  |  |          |
| 2                 |          | 2        | 75                | ✓ 75                 |   | XX  | X   |       |   |  |  |  |  |  |  |  |  |          |
| 3                 |          | 3        | 50                | ✓ 50                 |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 4                 |          | 4        | 40                | ✓ 40                 | XX  |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 5                 |          | 5        | 30                | ✓ 30                 |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 6                 |          | 6        | 20                | ✓ 20                 |   |     |     | X     |   |  |  |  |  |  |  |  |  |          |
| 7                 |          | 7        | 10                | ✓ 10                 |   |     |     | XX    |   |  |  |  |  |  |  |  |  |          |
| 8                 |          | 8        | 5                 | ✓ 5                  |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 9                 |          | 9        | 3fc               | ✓ 2.0                | X   | X   |     | X     |   |  |  |  |  |  |  |  |  |          |
| 10                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                      |   |     |     |       |   |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
SE/PC/CS/ky/Lib/HR/TF

Bottom Depth: 152 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 02:37 19:37  
Bottom (BO) 02:38 19:38  
End (EN) 02:49 19:49

Positional Information  
Start Lat: 48° 40' .339 N  
Lon: 123° 30' .330 W  
Bottom Lat: 48° 40' .338 N  
Lon: 123° 30' .334 W  
Finish Lat: 48° 40' .333 N  
Lon: 123° 30' .329 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 59 Event #: 4 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 12 | 06 | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |     |    |     |     |   |  |  | Comments |  |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|-----|-----|----|-----|-----|---|--|--|----------|--|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPC | PNO | DA | DIC | ION |   |  |  |          |  |
| 1                 |          | 10       | 6-5               | ✓                  | 228   | X   | X   |       |     |     |    | X   | X   |   |  |  |          |  |
| 2                 |          | 11       | 200               | ✓                  | 200   |     |     | X     |     |     |    | X   | X   |   |  |  |          |  |
| 3                 |          | 12       | 175               | ✓                  | 175   | XX  |     |       |     |     |    |     |     |   |  |  |          |  |
| 4                 |          | 13       | 150               | ✓                  | 150   | X   |     |       |     |     |    | X   | X   |   |  |  |          |  |
| 5                 |          | 14       | 125               | ✓                  | 125   |     | XX  |       |     |     |    |     |     |   |  |  |          |  |
| 6                 |          | 15       | 100               | ✓                  | 100   |     | X   |       |     |     |    | XX  | X   |   |  |  |          |  |
| 7                 |          | 16       | 75                | ✓                  | 75  |     | XX  |       |     |     |    | X   | X   |   |  |  |          |  |
| 8                 |          | 17       | 50                | ✓                  | 50  |     | X   |       |     |     |    | X   | X   |   |  |  |          |  |
| 9                 |          | 18       | 40                | ✓                  | 40  | XX  |     |       |     |     |    |     |     |   |  |  |          |  |
| 10                |          | 19       | 30                | ✓                  | 30  | X   |     |       |     |     |    | XX  | X   |   |  |  |          |  |
| 11                |          | 20       | 20                | ✓                  | 20  |     |     | XX    |     |     |    | X   | X   |   |  |  |          |  |
| 12                |          | 21       | 10                | ✓                  | 10  |     |     | X     |     |     |    | X   | X   |   |  |  |          |  |
| 13                |          | 22       | 5                 | ✓                  | 5   |     |     |       |     |     |    | X   | X   |   |  |  |          |  |
| 14                |          | 23       | Sfc               | ✓                  | 2.2   | X   | X   |       | X   | XX  | X  | X   | X   | X |  |  |          |  |
| 15                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 16                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 17                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 18                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 19                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 20                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 21                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 22                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 23                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |
| 24                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |   |  |  |          |  |

Profile type:  
Ros (default) | TrMet/Ros | X-Niskin  
Watchkeeper(s):

Bottom Depth: 230 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 05:29 | 22:29 |
| Bottom (BO) | 05:34 | 22:34 |
| End (EN)    | 05:48 | 22:48 |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 48° 37.879  | N |
| Lon: | 123° 14.640 | W |

Start

▼

|      |             |   |
|------|-------------|---|
| Lat: | 48° 37.894  | N |
| Lon: | 123° 14.684 | W |

Bottom

▼

|      |             |   |
|------|-------------|---|
| Lat: | 48° 38.010  | N |
| Lon: | 123° 14.789 | W |

Finish

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 102 Event #: 8 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 12 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |     |    |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|------|-----|----|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl a | HPLC | PAR | DA |  |  |  |  |  |  |          |
| 1                 |          | 24       | 5-5               | ✓ 250                | X   | X   |     |       |      |     |    |  |  |  |  |  |  |          |
| 2                 |          | 25       | 200               | ✓ 201                | I   | I   | X   |       |      |     |    |  |  |  |  |  |  |          |
| 3                 |          | 26       | 175               | ✓ 176                | XX  | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 4                 |          | 27       | 150               | ✓ 151                | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 5                 |          | 28       | 125               | ✓                    | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 6                 |          | 29       | 100               | ✓                    |   | XX  |     |       |      |     |    |  |  |  |  |  |  |          |
| 7                 |          | 30       | 75                | ✓                    | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 8                 |          | 31       | 50                | ✓ 51                 | I   | XY  |     |       |      |     |    |  |  |  |  |  |  |          |
| 9                 |          | 32       | 40                | ✓                    | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 10                |          | 33       | 30                | ✓                    | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 11                |          | 34       | 20                |                      | XY  | I   |     | X     |      |     |    |  |  |  |  |  |  |          |
| 12                |          | 35       | 10                |                      | I   | I   |     | X     |      |     |    |  |  |  |  |  |  |          |
| 13                |          | 36       | 5                 |                      | I   | I   |     |       |      |     |    |  |  |  |  |  |  |          |
| 14                |          | 37       | 8fc               |                      | X   | X   |     | XX    | XX   | X   | X  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 16                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 17                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 18                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 19                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 20                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 21                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 22                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 23                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |
| 24                |          |          |                   |                      |   |     |     |       |      |     |    |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
802

Bottom Depth: \_\_\_\_\_ m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 16 : 01 09 : 01  
Bottom (BO) 16 : 07 :  
End (EN) 16 : 27 :

Positional Information  
Start  
Lat: 48 ° 30 . 084 N  
Lon: 124 ° 44 . 041 W  
▼  
Bottom  
Lat: 48 ° 30 . 126 N  
Lon: 124 ° 44 . 196 W  
▼  
Finish  
Lat: 48 ° 30 . 174 N  
Lon: 124 ° 44 . 558 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 75 Event #: 11 Vessel: Vector UTC Date (dd|mmm|yyyy): 12 Jun 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |                               |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|-------------------------------|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | H <sub>2</sub> O <sub>2</sub> |  |  |  |  |  |  |  |  |          |
| 1                 |          | 38       | B-5               | ✓ 218              |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 2                 |          | 39       | 200               | ✓ 200              |   |     | X   |       |                               |  |  |  |  |  |  |  |  |          |
| 3                 |          | 40       | 175               | ✓ 175              |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 4                 |          | 41       | 150               | ✓ 150              |   | XX  |     |       |                               |  |  |  |  |  |  |  |  |          |
| 5                 |          | 42       | 125               | ✓ 125              | XX  |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 6                 |          | 43       | 100               | ✓ 100              |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 7                 |          | 44       | 75                | ✓ 75               |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 8                 |          | 45       | 50                | ✓ 50               |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 9                 |          | 46       | 40                | ✓ 40               |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 10                |          | 47       | 30                | ✓ 30               |   | XX  |     |       |                               |  |  |  |  |  |  |  |  |          |
| 11                |          | 48       | 20                | ✓ 20               |   |     |     | X     |                               |  |  |  |  |  |  |  |  |          |
| 12                |          | 49       | 10                | ✓ 10               |   |     |     | X     |                               |  |  |  |  |  |  |  |  |          |
| 13                |          | 50       | 5                 | ✓ 5                | XX  |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 14                |          | 51       | surf              | ✓ 2.2              | ✓   | ✓   |     | XX    | XX                            |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |                               |  |  |  |  |  |  |  |  |          |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):

Bottom Depth: 220 m  
 Transmisso Cleaned: (Y) / N  
 Fluorometer Cleaned: Y / N

| Time        | UTC           | Local         |
|-------------|---------------|---------------|
| Start (BE)  | <u>19 :14</u> | <u>12 :14</u> |
| Bottom (BO) | <u>19 :21</u> | <u>12 :21</u> |
| End (EN)    | <u>19 :34</u> | <u>12 :34</u> |

Positional Information

|      |                       |   |
|------|-----------------------|---|
| Lat: | <u>48 ° 28 . 138</u>  | N |
| Lon: | <u>124 ° 32 . 482</u> | W |

Bottom

|      |                       |   |
|------|-----------------------|---|
| Lat: | <u>48 ° 28 . 126</u>  | N |
| Lon: | <u>124 ° 32 . 413</u> | W |

Finish

|      |                       |   |
|------|-----------------------|---|
| Lat: | <u>48 ° 28 . 129</u>  | N |
| Lon: | <u>124 ° 32 . 092</u> | W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 72 Event #: 15 Vessel: Vector UTC Date (dd|mmm|yyyy): 12 | 06 | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |     |    |     |     |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|-----|-----|----|-----|-----|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HRP | PAR | DA | DIC | 10m |  |  |  |          |
| 1                 |          | 52       | 6.5               | ✓ 186              | X   | XX  |     |       |     |     |    | X   | X   |  |  |  |          |
| 2                 |          | 53       | 175               | ✓ 175              |   |     | X   |       |     |     |    |     |     |  |  |  |          |
| 3                 |          | 54       | 150               | ✓ 150              |   |     |     |       |     |     |    | XX  | X   |  |  |  |          |
| 4                 |          | 55       | 125               | ✓ 125              |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 5                 |          | 56       | 100               | ✓ 100              | XX  |     |     |       |     |     |    | X   | X   |  |  |  |          |
| 6                 |          | 57       | 75                | ✓ 75               | XX  |     |     |       |     |     |    | X   | X   |  |  |  |          |
| 7                 |          | 58       | 50                | ✓ 50               |   |     |     |       |     |     |    | X   | X   |  |  |  |          |
| 8                 |          | 59       | 40                | ✓ 40               |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 9                 |          | 60       | 30                | ✓ 30               |   | XX  |     |       |     |     |    | XX  | X   |  |  |  |          |
| 10                |          | 61       | 20                | ✓ 20               |   |     |     | X     |     |     |    | X   | XX  |  |  |  |          |
| 11                |          | 62       | 10                | ✓ 10               |   |     |     | XX    |     |     |    | X   | X   |  |  |  |          |
| 12                |          | 63       | 5                 | ✓ 5                |   |     |     |       |     |     |    | X   | X   |  |  |  |          |
| 13                |          | 64       | 80                | ✓ 2.3              | X   | X   |     | X     | XX  | X   | X  | X   | X   |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |     |     |    |     |     |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin

Watchkeeper(s):  
REKYS MB

Bottom Depth: 189 m

Transmisso Cleaned: ☒ Y / ☐ N

Fluorometer Cleaned: ☒ Y / ☐ N

| Time        | UTC            | Local          |
|-------------|----------------|----------------|
| Start (BE)  | <u>23 : 26</u> | <u>16 : 26</u> |
| Bottom (BO) | <u>23 : 30</u> | <u>16 : 30</u> |
| End (EN)    | <u>23 : 41</u> | <u>16 : 41</u> |

Positional Information

|        |                              |
|--------|------------------------------|
| Start  | Lat: <u>48 ° 18 . 641</u> N  |
|        | Lon: <u>124 ° 04 . 028</u> W |
|        | ▼                            |
| Bottom | Lat: <u>48 ° 18 . 578</u> N  |
|        | Lon: <u>124 ° 04 . 882</u> W |
|        | ▼                            |
| Finish | Lat: <u>48 ° 18 . 385</u> N  |
|        | Lon: <u>124 ° 03 . 492</u> W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 69 Event #: 18 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 13 | 06 | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |    |  |  |  |  |  |  |  |  | Comments         |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|------|----|--|--|--|--|--|--|--|--|------------------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl a | HPLC |    |  |  |  |  |  |  |  |  |                  |
| 1                 |          | 65       | 6-5               | ✓                    | 173   | X   | X   |       |      |    |  |  |  |  |  |  |  |  |                  |
| 2                 |          | 66       | 150               | ✓                    | 150   | XX  |     | X     |      |    |  |  |  |  |  |  |  |  |                  |
| 3                 |          | 67       | 125               | ✓                    | 125   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 4                 |          | 68       | 100               | ✓                    | 100   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 5                 |          | 69       | 75                | ✓                    | 75  |     |     | XX    |      |    |  |  |  |  |  |  |  |  |                  |
| 6                 |          | 70       | 50                | ✓                    | 50  |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 7                 |          | 71       | 40                | ✓                    | 40  | XX  |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 8                 |          | 72       | 30                |                      | 30  |     |     |       |      |    |  |  |  |  |  |  |  |  | start stake time |
| 9                 |          | 73       | 20                | ✓                    | 20  |     |     |       | XX   |    |  |  |  |  |  |  |  |  |                  |
| 10                |          | 74       | 10                | ✓                    | 10  |     |     |       | X    |    |  |  |  |  |  |  |  |  |                  |
| 11                |          | 75       | 5                 | ✓                    | 5   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 12                |          | 76       | ste               | ✓                    | 2.7   | X   | XX  |       | X    | XX |  |  |  |  |  |  |  |  |                  |
| 13                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 14                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 15                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 16                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 17                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 18                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 19                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 20                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 21                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 22                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 23                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |
| 24                |          |          |                   |                      |   |     |     |       |      |    |  |  |  |  |  |  |  |  |                  |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
PMBKYCS

Bottom Depth: 180 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 02 :31 19 :31  
 Bottom (BO) 02 :35 19 :35  
 End (EN) 02 :47 19 :45

Positional Information  
 Start  
 Lat: 48 ° 15 .588 N  
 Lon: 123 ° 43 .430 W  
 Bottom  
 Lat: 48 ° 15 .606 N  
 Lon: 123 ° 43 .434 W  
 Finish  
 Lat: 48 ° 15 .643 N  
 Lon: 123 ° 43 .507 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 208-30 Station: ADCP Event #: 21 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 13 | JUN | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |     |    |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|-----|----|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC | PAR | DA |  |  |  |  |  |  |  |          |
| 1                 |          | 77       | Blm S             | ✓                  | 118   | x   | x   | x     |      |     |    |  |  |  |  |  |  |  |          |
| 2                 |          | 78       | 100               | ✓                  | 100   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 3                 |          | 79       | 75                | ✓                  | 75  |     | xx  |       |      |     |    |  |  |  |  |  |  |  |          |
| 4                 |          | 80       | 50                | ✓                  | 50  | xx  |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 5                 |          | 81       | 40                | ✓                  | 40  |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 6                 |          | 82       | 30                | ✓                  | 30  |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 7                 |          | 83       | 20                | ✓                  | 20  |     |     | xx    |      |     |    |  |  |  |  |  |  |  |          |
| 8                 |          | 84       | 10                | ✓                  | 10  | xx  |     | x     |      |     |    |  |  |  |  |  |  |  |          |
| 9                 |          | 85       | 5                 | ✓                  | 5   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 10                |          | 86       | sfc               | ✓                  | 2.2   | x   | xx  | x     | xx   | x   | x  |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |     |    |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
PCCKYMB

Bottom Depth: 125 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  

| Time        | UTC          | Local        |
|-------------|--------------|--------------|
| Start (BE)  | <u>05:50</u> | <u>22:50</u> |
| Bottom (BO) | <u>05:52</u> | <u>22:52</u> |
| End (EN)    | <u>06:01</u> | <u>23:01</u> |

Positional Information  

|        |                             |
|--------|-----------------------------|
| Start  | Lat: <u>48° 13' .990</u> N  |
|        | Lon: <u>123° 18' .016</u> W |
| Bottom | Lat: <u>48° 13' .991</u> N  |
|        | Lon: <u>123° 18' .046</u> W |
| Finish | Lat: <u>48° 13' .961</u> N  |
|        | Lon: <u>123° 18' .216</u> W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 65 Event #: 25 Vessel: VECTOP UTC Date (dd|mmm|yyyy): 13 | Jun | 2012

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |  |          |
| 1                 |          | 87       | Blm-5             | ✓                  | 124   | X   | X   | X     |      |  |  |  |  |  |  |  |  |          |
| 2                 |          | 88       | 100               | ✓                  |   | X   |     |       |      |  |  |  |  |  |  |  |  |          |
| 3                 |          | 89       | 75                | ✓                  |   | X   |     |       |      |  |  |  |  |  |  |  |  |          |
| 4                 |          | 90       | 50                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 5                 |          | 91       | 40                | ✓                  | X   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 6                 |          | 92       | 30                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 7                 |          | 93       | 20                | ✓                  |   |     |     | X     |      |  |  |  |  |  |  |  |  |          |
| 8                 |          | 94       | 10                | ✓                  |   | X   |     | X     |      |  |  |  |  |  |  |  |  |          |
| 9                 |          | 95       | 5                 | ✓                  | X   | X   |     |       |      |  |  |  |  |  |  |  |  |          |
| 10                |          | 96       | SL                | ✓                  | X   | X   |     | X     | X    |  |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |

Profile type:  
 Ros (default) | TrMet/Ros | X-Niskin  
 Watchkeeper(s):  
SR

Bottom Depth: \_\_\_\_\_ m  
 Transmisso Cleaned: ☒ Y / ☐ N  
 Fluorometer Cleaned: ☐ Y / ☐ N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 08:33 | 01:33 |
| Bottom (BO) | 08:37 | :     |
| End (EN)    | 08:48 | :     |

Positional Information

| Start             | Bottom            | Finish            |
|-------------------|-------------------|-------------------|
| Lat: 48° 15.894 N | Lat: 48° 15.891 N | Lat: 48° 15.888 N |
| Lon: 123° 9.793 W | Lon: 123° 9.784 W | Lon: 123° 9.775 W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 208-30 Station: 63 Event #: 28 Vessel: Vector UTC Date (dd|mmm|yyyy): 13 | June | 2018

| Bottles & Samples |          |          | Rosette Operation |                      |     | Samples Taken (↓ write samplers' initials under each sample type) |     |       |     |    |       |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|-----|---|-----|-------|-----|----|-------|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy | Nut   | Sal | Chl a | PLC | DA | Phyto |  |  |  |  |  |  |  |          |
| 1                 |          | 97       | 20                | /                    |     | X   |     | X     |     |    |       |  |  |  |  |  |  |  |          |
| 2                 |          | 98       | 10                | /                    |     | XX  |     | XX    |     |    |       |  |  |  |  |  |  |  |          |
| 3                 |          | 99       | Surf              | /                    |     | X   |     | X     | XX  | X  | X     |  |  |  |  |  |  |  |          |
| 4                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 5                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 6                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 7                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 8                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 9                 |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 10                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                      |     |   |     |       |     |    |       |  |  |  |  |  |  |  |          |

Profile type:  

☒ Ros (default) ☐ TrMetlRos ☐ X-Niskin

Watchkeeper(s):  

ER

Bottom Depth: 159 m

Transmisso Cleaned: ☒ Y / ☐ N

Fluorometer Cleaned: ☐ Y / ☐ N

Time

UTC

Local

Start (BE)

10 : 34

03 : 34

Bottom (BO)

10 : 37

:

End (EN)

10 : 43

:

Positional Information

Start

Lat: 48° 14.639 N

Lon: 122° 58.519 W

▼

Bottom

Lat: 48° 14.628 N

Lon: 122° 58.489 W

▼

Finish

Lat: 48° 14.614 N

Lon: 122° 58.448 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 62 Event #: 29 Vessel: Vector UTC Date (dd|mmm|yyyy): 13 June 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |  |          |
| 1                 |          | 100      | B-5               |                    | 147   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 2                 |          | 101      | 125               |                    |   |     |     | X     |      |  |  |  |  |  |  |  |  |          |
| 3                 |          | 102      | 100               |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 4                 |          | 103      | 75                |                    |   |     | XX  |       |      |  |  |  |  |  |  |  |  |          |
| 5                 |          | 104      | 50                |                    |   | XX  |     |       |      |  |  |  |  |  |  |  |  |          |
| 6                 |          | 105      | 40                |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 7                 |          | 106      | 30                |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 8                 |          | 107      | 20                |                    |   |     |     | XX    |      |  |  |  |  |  |  |  |  |          |
| 9                 |          | 108      | 10                |                    |   | XX  |     | X     |      |  |  |  |  |  |  |  |  |          |
| 10                |          | 109      | 5                 |                    |   |     | XX  |       |      |  |  |  |  |  |  |  |  |          |
| 11                |          | 110      | Surf              |                    |   | ✓   | ✓   | X     | XX   |  |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  

SR

Bottom Depth: 149 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 12:01 | 05:01 |
| Bottom (BO) | 12:05 | :     |
| End (EN)    | 12:17 | :     |

Positional Information  
Start  
Lat: 48° 22.765 N  
Lon: 123° 2.648 W

Bottom  
Lat: 48° 22.764 N  
Lon: 123° 2.646 W

Finish  
Lat: 48° 22.751 N  
Lon: 123° 2.659 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 56 Event #: 34 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 13 | Jul | 2018

| Bottles & Samples |          |          | Rosette Operation |                      |     | Samples Taken (↓ write samplers' initials under each sample type) |     |       |      |    |       |   |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|-----|---|-----|-------|------|----|-------|---|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy | Nut   | Sal | Chl a | HPLC | DA | Phyto |   |  |  |  |  |  |          |
| 1                 |          | 111      | B-5               | ✓                    | 211 |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 2                 |          | 112      | 200               | ✓                    | 200 |   |     | X     |      |    |       |   |  |  |  |  |  |          |
| 3                 |          | 113      | 175               | ✓                    | 175 |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 4                 |          | 114      | 150               | ✓                    | 150 |   | XX  |       |      |    |       |   |  |  |  |  |  |          |
| 5                 |          | 115      | 125               | ✓                    | 125 |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 6                 |          | 116      | 100               | ✓                    | 100 | XX  |     |       |      |    |       |   |  |  |  |  |  |          |
| 7                 |          | 117      | 75                | ✓                    | 75  |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 8                 |          | 118      | 50                | ✓                    | 50  |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 9                 |          | 119      | 40                | ✓                    | 40  |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 10                |          | 120      | 30                | ✓                    | 30  |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 11                |          | 121      | 20                | ✓                    | 20  |   | XX  |       | XX   |    |       |   |  |  |  |  |  |          |
| 12                |          | 122      | 10                | ✓                    | 10  | XX  |     |       | X    |    |       |   |  |  |  |  |  |          |
| 13                |          | 123      | 5                 | ✓                    | 5   | ↓   | ↓   |       |      |    |       |   |  |  |  |  |  |          |
| 14                |          | 124      | SWF               | ✓                    | 2.3 | ↓   | ↓   |       | X    | XX | X     | X |  |  |  |  |  |          |
| 15                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 16                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 17                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 18                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 19                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 20                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 21                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 22                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 23                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |
| 24                |          |          |                   |                      |     |   |     |       |      |    |       |   |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
RKY/MBK

Bottom Depth: 217 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 20:00 13:00  
Bottom (BO) 20:05 13:05  
End (EN) 20:17 13:17

Positional Information  
Start  
Lat: 48° 46.391 N  
Lon: 123° 01.520 W

Bottom  
Lat: 48° 46.441 N  
Lon: 123° 01.448 W

Finish  
Lat: 48° 46.648 N  
Lon: 123° 01.199 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 46 Event #: 45 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 14 JUN 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |    |    |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|----|----|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |    |    |  |  |  |  |  |  |  |          |
| 1                 |          | 125      | Btm-S             | ✓                  | 184   | X   | X   | X     |      |    |    |  |  |  |  |  |  |  |          |
| 2                 |          | 126      | 150               | ✓                  | 150   |     | 1   |       |      |    |    |  |  |  |  |  |  |  |          |
| 3                 |          | 127      | 125               | ✓                  | 125   |     | X   |       |      |    |    |  |  |  |  |  |  |  |          |
| 4                 |          | 128      | 100               | ✓                  | 100   | XX  |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 5                 |          | 129      | 75                | ✓                  | 75  |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 6                 |          | 130      | 50                | ✓                  | 50  |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 7                 |          | 131      | 40                | ✓                  | 40  |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 8                 |          | 132      | 30                | ✓                  | 30  |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 9                 |          | 133      | 20                | ✓                  | 20  |     |     |       |      | X  |    |  |  |  |  |  |  |  |          |
| 10                |          | 134      | 10                | ✓                  | 10  |     | XX  |       |      | X  |    |  |  |  |  |  |  |  |          |
| 11                |          | 135      | 5                 | ✓                  | 5   | XY  |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 12                |          | 136      | sfC               | ✓                  | sfC   | X   |     |       |      | XX | XX |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |    |    |  |  |  |  |  |  |  |          |

Profile type:  
 Ros (default) | TrMet/Ros | X-Niskin  
 Watchkeeper(s):  
PC/cy/MB/CJ

Bottom Depth: 187 m  
 Transmisso Cleaned: (Y) / N  
 Fluorometer Cleaned: (Y) / N  
 Time UTC Local  
 Start (BE) 03:53 20:53  
 Bottom (BO) 03:57 20:57  
 End (EN) 04:08 21:08

Positional Information  
 Start  
 Lat: 48° 51' .287 N  
 Lon: 123° 10' .703 W  
 Bottom  
 Lat: 48° 51' .219 N  
 Lon: 123° 10' .558 W  
 Finish  
 Lat: 48° 51' .062 N  
 Lon: 123° 10' .103 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 42 Event #: 50 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 14 | June | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |       |    |     |     |    |  |  | Comments |  |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|-------|----|-----|-----|----|--|--|----------|--|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC | Phylo | DJ | DIC | ION |    |  |  |          |  |
| 1                 |          | 137      | Btm-5             | /                  | 319   | X   | X   | X     |      |       |    |     | X   | X  |  |  |          |  |
| 2                 |          | 138      | 300               | /                  |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 3                 |          | 139      | 250               | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 4                 |          | 140      | 200               | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 5                 |          | 141      | 175               | /                  |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 6                 |          | 142      | 150               | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 7                 |          | 143      | 125               | /                  |   | XX  |     |       |      |       |    |     | XX  | X  |  |  |          |  |
| 8                 |          | 144      | 100               | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 9                 |          | 145      | 75                | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 10                |          | 146      | 50                | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 11                |          | 147      | 40                | /                  |   | XX  |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 12                |          | 148      | 30                | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 13                |          | 149      | 20                | /                  |   |     |     |       | X    |       |    |     | XX  | X  |  |  |          |  |
| 14                |          | 150      | 10                | /                  |   | XX  |     | XX    |      |       |    |     | X   | XX |  |  |          |  |
| 15                |          | 151      | 5                 | /                  |   |     |     |       |      |       |    |     | X   | X  |  |  |          |  |
| 16                |          | 152      | sf                | /                  |   | ↓   | ↓   |       | X    | XX    | X  | X   | X   | X  |  |  |          |  |
| 17                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 18                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 19                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 20                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 21                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 22                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 23                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |
| 24                |          |          |                   |                    |   |     |     |       |      |       |    |     |     |    |  |  |          |  |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
SR

Bottom Depth: 324 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 08:51 01:51  
 Bottom (BO) 08:58 :  
 End (EN) 09:18 :

Positional Information  
 Start  
 Lat: 49° 01.705 N  
 Lon: 123° 26.274 W  
 Bottom  
 Lat: 49° 01.679 N  
 Lon: 123° 26.339 W  
 Finish  
 Lat: 49° 01.673 N  
 Lon: 123° 26.462 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 39 Event #: 56 Vessel: Vector UTC Date (dd|mmm|yyyy): 14 | June | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |  |  |  |  |  |  |  |  |  | Comments   |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|--|--|--|--|--|--|--|--|--|--|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |  |  |  |
| 1                 |          | 153      | B-5               | ✓ 373              |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 2                 |          | 154      | 350               | ✓                  |   |     | X   |       |      |  |  |  |  |  |  |  |  |  |  |
| 3                 |          | 155      | 300               | ✓ 301              |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 4                 |          | 156      | 250               | ✓                  |   | XX  |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 5                 |          | 157      | 200               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 6                 |          | 158      | 175               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 7                 |          | 159      | 150               | ✓                  | XX  |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 8                 |          | 160      | 125               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 9                 |          | 161      | 100               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 10                |          | 162      | 75                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 11                |          | 163      | 50                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 12                |          | 164      | 40                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 13                |          | 165      | 30                | ✓                  | XX  |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 14                |          | 166      | 20                | ✓                  |   | XX  |     | X     |      |  |  |  |  |  |  |  |  |  |  |
| 15                |          | 167      | 10                | ✓                  |   |     |     | XX    |      |  |  |  |  |  |  |  |  |  |  |
| 16                |          | 168      | 5                 | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 17                |          | 169      | surf              | ✓                  | ↓   | ↓   |     | X     | XX   |  |  |  |  |  |  |  |  |  | bottle did not close we used bot 16 for CHL a + HPLC |
| 18                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 19                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 20                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 21                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 22                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 23                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |
| 24                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |  |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
SR

Bottom Depth: 378 m  
 Transmisso Cleaned: (Y) / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 14 : 44 07:44  
 Bottom (BO) 14 : 51 :  
 End (EN) 15 : 17 :

Positional Information  
 Start Lat: 49 ° 9 . 818 N  
 Lon: 123 ° 33 . 005 W  
 Bottom Lat: 49 ° 9 . 835 N  
 Lon: 123 ° 33 . 060 W  
 Finish Lat: 49 ° 9 . 809 N  
 Lon: 123 ° 33 . 178 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



\* Sample numbers changed to 9186, 9187, 9188 because the numbers were also used during Event #70

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |    |    |  |  |  |  |  |  |  | Comments                   |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|----|----|--|--|--|--|--|--|--|----------------------------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | MP | LC |  |  |  |  |  |  |  |                            |
| 1                 |          | 9186     | 20                | ✓                  |   | X   |     | X     |    |    |  |  |  |  |  |  |  |                            |
| 2                 |          | 9187     | 10                | ✓                  |   | XX  |     | X     |    |    |  |  |  |  |  |  |  |                            |
| 3                 |          | 9188     | surf              | X                  |   | X   |     | XX    | XX |    |  |  |  |  |  |  |  | See event 60 for bot+3file |
| 4                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 5                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 6                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 7                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 8                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 9                 |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 10                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 11                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 12                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 13                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 14                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 15                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 16                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 17                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 18                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 19                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 20                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 21                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 22                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 23                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |
| 24                |          |          |                   |                    |   |     |     |       |    |    |  |  |  |  |  |  |  |                            |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin

Watchkeeper(s):  
SR

Bottom Depth: 402 m

Transmisso Cleaned: (Y) / N

Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 17:32 | :     |
| Bottom (BO) | 17:40 | :     |
| End (EN)    | 17:50 | :     |

Positional Information

Start

Lat: 49° 15 .071 N

Lon: 123° 44 .990 W

▼

Bottom

Lat: 49° 15 .050 N

Lon: 123° 45 .019 W

▼

Finish

Lat: 49° 15 .049 N

Lon: 123° 45 .010 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 27 Event #: 64 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 14 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |     |    |     |                 |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|-----|----|-----|-----------------|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC | Phy | DA | DIC | 10 <sup>1</sup> |  |  |  |  |          |
| 1                 |          | 170      | B-5               | ✓                  | 338   |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 2                 |          | 171      | 300               | ✓                  | 300   |     |     | X     |      |     |    | X   | X               |  |  |  |  |          |
| 3                 |          | 172      | 250               | ✓                  | 250   |     | XX  |       |      |     |    | X   | X               |  |  |  |  |          |
| 4                 |          | 173      | 200               | ✓                  | 200   |     |     |       |      |     |    | X   | XX              |  |  |  |  |          |
| 5                 |          | 174      | 175               | ✓                  | 175   |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 6                 |          | 175      | 150               | ✓                  | 150   | XX  |     |       |      |     |    | XX  | X               |  |  |  |  |          |
| 7                 |          | 176      | 125               | ✓                  | 125   |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 8                 |          | 177      | 100               | ✓                  | 100   |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 9                 |          | 178      | 75                | ✓                  | 75  |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 10                |          | 179      | 50                | ✓                  | 50  |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 11                |          | 180      | 40                | ✓                  | 40  |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 12                |          | 181      | 30                | ✓                  | 30  | XX  |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 13                |          | 182      | 20                | ✓                  | 20  |     | XX  | X     |      |     |    | XX  | X               |  |  |  |  |          |
| 14                |          | 183      | 10                | ✓                  | 10  |     |     | XX    |      |     |    | X   | X               |  |  |  |  |          |
| 15                |          | 184      | 5                 | ✓                  | 5   |     |     |       |      |     |    | X   | X               |  |  |  |  |          |
| 16                |          | 185      | SWF               | ✓                  | 2.1   | ↓   | ↓   | X     | XX   | X   | X  | X   | X               |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |     |    |     |                 |  |  |  |  |          |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
2018/MB/KY

Bottom Depth: 345 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 20:17 13:17  
 Bottom (BO) 20:24 13:24  
 End (EN) 20:40 13:40

Positional Information  
 Start  
 Lat: 49° 19.130 N  
 Lon: 123° 47.984 W  
 Bottom  
 Lat: 49° 19.117 N  
 Lon: 123° 47.914 W  
 Finish  
 Lat: 49° 19.212 N  
 Lon: 123° 48.013 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 2 Event #: 70 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 15 JUL 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |      |    |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|------|----|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPIC | PHYS | DA |  |  |  |  |  |  |          |
| 1                 |          | 186      | Bm S              | ✓ 276              |   | 1   | X   |       |      |      |    |  |  |  |  |  |  |          |
| 2                 |          | 187      | 50                | ✓ 250              |   | X   |     |       |      |      |    |  |  |  |  |  |  |          |
| 3                 |          | 188      | 200               | ✓ 200              | X   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 4                 |          | 189      | 175               | ✓ 175              |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 5                 |          | 190      | 50                | ✓ 150              |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 6                 |          | 191      | 125               | ✓ 125              |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 7                 |          | 192      | 100               | ✓ 100              |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 8                 |          | 193      | 75                | ✓ 75               |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 9                 |          | 194      | 50                | ✓ 50               |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 10                |          | 195      | 40                | ✓ 40               |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 11                |          | 196      | 30                | ✓ 30               |   | X   |     |       |      |      |    |  |  |  |  |  |  |          |
| 12                |          | 197      | 20                | ✓ 20               |   |     |     | XX    |      |      |    |  |  |  |  |  |  |          |
| 13                |          | 198      | 10                | ✓ 10               |   |     |     | X     |      |      |    |  |  |  |  |  |  |          |
| 14                |          | 199      | 5                 | ✓ 5                | X   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 15                |          | 200      | sfc               | ✓ 2.2              |   |     |     | X     | XX   | X    | X  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |      |    |  |  |  |  |  |  |          |

Profile type:  
 Ros (default) | TrMetlRos | X-Niskin  
 Watchkeeper(s):  
REYESMB

Bottom Depth: 282 m  
 Transmisso Cleaned: Y / N  
 Fluorometer Cleaned: Y / N  
 Time UTC Local  
 Start (BE) 01 : 20 18 : 20  
 Bottom (BO) 01 : 26 18 : 26  
 End (EN) 01 : 40 18 : 40

Positional Information  
 Start  
 Lat: 49° 24' .143 N  
 Lon: 124° 09' .266 W  
 Bottom  
 Lat: 49° 24' .167 N  
 Lon: 124° 09' .124 W  
 Finish  
 Lat: 49° 24' .377 N  
 Lon: 124° 09' .001 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 3 Event #: 75 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 15 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |  |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|--|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |  |  |          |
| 1                 |          | 201      | 300               | ✓                  | 326   | X   | X   |       |      |  |  |  |  |  |  |  |  |  |          |
| 2                 |          | 202      | 300               | ✓                  | 300   |     |     | X     |      |  |  |  |  |  |  |  |  |  |          |
| 3                 |          | 203      | 250               | ✓                  | 250   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 4                 |          | 204      | 200               | ✓                  | 200   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 5                 |          | 205      | 175               | ✓                  | 175   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 6                 |          | 206      | 150               | ✓                  | 150   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 7                 |          | 207      | 125               | ✓                  | 125   | XX  |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 8                 |          | 208      | 100               | ✓                  | 100   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 9                 |          | 209      | 75                | ✓                  | 75  |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 10                |          | 210      | 50                | ✓                  | 50  | XX  |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 11                |          | 211      | 40                | ✓                  | 40  |     | XX  |       |      |  |  |  |  |  |  |  |  |  |          |
| 12                |          | 212      | 30                | ✓                  | 30  |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 13                |          | 213      | 20                | ✓                  | 20  |     |     | X     |      |  |  |  |  |  |  |  |  |  |          |
| 14                |          | 214      | 10                | ✓                  | 10  |     |     | XX    |      |  |  |  |  |  |  |  |  |  |          |
| 15                |          | 215      | 5                 | ✓                  | 5   |     | XX  |       |      |  |  |  |  |  |  |  |  |  |          |
| 16                |          | 216      | SFC               | ✓                  | 2.1   |     |     | X     | XX   |  |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
RKBK/08

Bottom Depth: 333 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 05:10 | 22:00 |
| Bottom (BO) | 05:17 | 22:17 |
| End (EN)    | 05:32 | 22:32 |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 49° 26.489  | N |
| Lon: | 124° 20.242 | W |

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49° 26.498  | N |
| Lon: | 124° 20.141 | W |

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49° 26.446  | N |
| Lon: | 124° 19.988 | W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



# Water Properties Group

# Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 218-30 Station: 6 Event #: 78 Vessel: VECDR UTC Date (dd|mmm|yyyy): 15 | June | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |  |          |
| 1                 |          | 217      | Btm-5             | ✓ 190              | x   | x   |     |       |      |  |  |  |  |  |  |  |  |          |
| 2                 |          | 218      | 175               | ✓                  |   |     | x   |       |      |  |  |  |  |  |  |  |  |          |
| 3                 |          | 219      | 150               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 4                 |          | 220      | 125               | ✓                  |   | x   |     |       |      |  |  |  |  |  |  |  |  |          |
| 5                 |          | 221      | 100               | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 6                 |          | 222      | 75                | ✓                  | x   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 7                 |          | 223      | 50                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 8                 |          | 224      | 40                | ✓                  |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 9                 |          | 225      | 30                |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 10                |          | 226      | 20                |                    |   |     |     | x     |      |  |  |  |  |  |  |  |  |          |
| 11                |          | 227      | 10                |                    |   | x   |     | x     |      |  |  |  |  |  |  |  |  |          |
| 12                |          | 228      | 5                 |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 13                |          | 229      | stc               |                    | x   |     |     | x     | x    |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
ZR

Bottom Depth: 194 m  
Transmisso Cleaned: (Y) / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 07:40 00:40  
Bottom (BO) 07:43 :  
End (EN) : :

Positional Information  
Start  
Lat: 49° 30.576 N  
Lon: 124° 27.799 W

Bottom  
Lat: 49° 30.588 N  
Lon: 124° 27.797 W

Finish  
Lat: 49° 30. N  
Lon: 124° 27. W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 9 Event #: 81 Vessel: Vector UTC Date (dd|mmm|yyyy): 15 Jun 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |    |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|----|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a |    |  |  |  |  |  |  |  |  |          |
| 1                 |          | 230      | B-5               |                    | 166   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 2                 |          | 231      | 150               |                    |   |     |     | X     |    |  |  |  |  |  |  |  |  |          |
| 3                 |          | 232      | 125               |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 4                 |          | 233      | 100               |                    |   | XX  |     |       |    |  |  |  |  |  |  |  |  |          |
| 5                 |          | 234      | 75                |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 6                 |          | 235      | 50                |                    | XX  |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 7                 |          | 236      | 40                |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 8                 |          | 237      | 30                |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 9                 |          | 238      | 20                |                    |   |     |     | X     |    |  |  |  |  |  |  |  |  |          |
| 10                |          | 239      | 10                |                    |   |     |     | X     |    |  |  |  |  |  |  |  |  |          |
| 11                |          | 240      | 5                 |                    |   | XX  |     |       |    |  |  |  |  |  |  |  |  |          |
| 12                |          | 241      | surf              |                    | XX  |     |     | XX    | XX |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |    |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
SR

Bottom Depth: 173 m  
Transmisso Cleaned: Y N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 10:41 03:41  
Bottom (BO) 10:45 :  
End (EN) 11:00 :

Positional Information  
Start  
Lat: 49° 35.520 N  
Lon: 124° 38.288 W  
▼  
Bottom  
Lat: 49° 35.520 N  
Lon: 124° 38.303 W  
▼  
Finish  
Lat: 49° 35.520 N  
Lon: 124° 38.340 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 12 Event #: 816 Vessel: Vector UTC Date (dd|mmm|yyyy): 15 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |    |       |     |     |  |  |  |  | Comments          |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|-----|----|-------|-----|-----|--|--|--|--|-------------------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | PLC | DA | Phyto | DIC | ION |  |  |  |  |                   |
| 1                 |          | 242      | B-5               | ✓ 353              |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 2                 |          | 243      | 300               | ✓                  |   |     | X   |       |     |    |       |     |     |  |  |  |  |                   |
| 3                 |          | 244      | 250               | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 4                 |          | 245      | 200               | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 5                 |          | 246      | 175               | ✓                  | XX  |     |     |       |     |    |       |     | XX  |  |  |  |  |                   |
| 6                 |          | 247      | 150               | ✓                  |   |     |     |       |     |    |       | XX  |     |  |  |  |  |                   |
| 7                 |          | 248      | 125               | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 8                 |          | 249      | 100               | ✓                  |   | XX  |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 9                 |          | 250      | 75                | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 10                |          | 251      | 50                | ✓                  |   |     |     |       |     |    |       | XX  |     |  |  |  |  |                   |
| 11                |          | 252      | 40                | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 12                |          | 253      | 30                | ✓                  |   |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 13                |          | 254      | 20                | ✓                  |   |     |     |       |     |    |       | X   | XX  |  |  |  |  |                   |
| 14                |          | 255      | 10                | ✓                  | XX  |     |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 15                |          | 256      | 5                 | ✓                  |   | XX  |     |       |     |    |       | X   |     |  |  |  |  |                   |
| 16                |          | 257      | SWIF              | ✓                  |   |     |     |       |     | X  | X     | X   |     |  |  |  |  | no DA sample here |
| 17                |          | 258      | SWIF              | ✓                  |   |     |     |       | XX  |    |       |     |     |  |  |  |  |                   |
| 18                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 19                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 20                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 21                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 22                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 23                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |
| 24                |          |          |                   |                    |   |     |     |       |     |    |       |     |     |  |  |  |  |                   |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
SR

Bottom Depth: 358 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 14:21 07:21  
Bottom (BO) 14:29 :  
End (EN) 14:52 :

Positional Information  
Start  
Lat: 49 ° 43.614 N  
Lon: 124 ° 40.810 W  
▼  
Bottom  
Lat: 49 ° 43.633 N  
Lon: 124 ° 40.860 W  
▼  
Finish  
Lat: 49 ° 43.633 N  
Lon: 124 ° 40.987 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 14 Event #: 90 Vessel: Vector UTC Date (dd|mmm|yyyy): 15 Jun 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |    |       |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|----|-------|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | HLCC | DA | Phyto |  |  |  |  |  |  |          |
| 1                 |          | 259      | B-5               | ✓                  |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 2                 |          | 260      | 250               | ✓                  |   |     | X   |       |      |    |       |  |  |  |  |  |  |          |
| 3                 |          | 261      | 200               | ✓                  | XX  |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 4                 |          | 262      | 175               | ✓                  |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 5                 |          | 263      | 150               |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 6                 |          | 264      | 125               |                    |   | XX  |     |       |      |    |       |  |  |  |  |  |  |          |
| 7                 |          | 265      | 100               |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 8                 |          | 266      | 75                |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 9                 |          | 267      | 50                |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 10                |          | 268      | 40                |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 11                |          | 269      | 30                |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 12                |          | 270      | 20                |                    | XX  |     |     | X     |      |    |       |  |  |  |  |  |  |          |
| 13                |          | 271      | 10                |                    |   | XX  |     | XX    |      |    |       |  |  |  |  |  |  |          |
| 14                |          | 272      | 5                 |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 15                |          | 273      | surf              |                    |   |     |     | X     | XX   | X  | X     |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |      |    |       |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
SR

Bottom Depth: 315 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 18:00 11:00  
Bottom (BO) 18:07 :  
End (EN) 18:25 :

Positional Information  
Start  
Lat: 49° 53.027 N  
Lon: 124° 59.560 W

Bottom  
Lat: 49° 53.042 N  
Lon: 124° 59.632 W

Finish  
Lat: 49° 53.027 N  
Lon: 124° 59.849 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 16 Event #: 92 Vessel: Vector UTC Date (dd|mmm|yyyy): 15 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|-----|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl a | POC |  |  |  |  |  |  |  |  |          |
| 1                 |          | 274      | B-5               | ✓ 137              | ✓   | ✓   | X   |       |     |  |  |  |  |  |  |  |  |          |
| 2                 |          | 275      | 125               | ✓ 125              | ✓   | xx  |     |       |     |  |  |  |  |  |  |  |  |          |
| 3                 |          | 276      | 100               | ✓ 100              | xx  | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 4                 |          | 277      | 75                | ✓ 75               | ✓   | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 5                 |          | 278      | 50                | ✓ 50               | ✓   | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 6                 |          | 279      | 40                | ✓ 40               | ✓   | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 7                 |          | 280      | 30                | ✓ 30               | ✓   | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 8                 |          | 281      | 20                | ✓ 20               | xx  | ✓   |     | xx    |     |  |  |  |  |  |  |  |  |          |
| 9                 |          | 282      | 10                | ✓ 10               | ✓   | xx  |     | X     |     |  |  |  |  |  |  |  |  |          |
| 10                |          | 283      | 5                 | ✓ 5                | ✓   | ✓   |     |       |     |  |  |  |  |  |  |  |  |          |
| 11                |          | 284      | Surf              | ✓ 50               | ✓   | ✓   |     | X     | xx  |  |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                    |   |     |     |       |     |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
RC/MB/KY/CS

Bottom Depth: 152 m

Transmisso Cleaned: Y / N

Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 19:56 | 12:56 |
| Bottom (BO) | 20:01 | 13:01 |
| End (EN)    | 20:12 | 13:12 |

Positional Information

|        |                      |
|--------|----------------------|
| Start  | Lat: 49° 51' .655 N  |
|        | Lon: 125° 08' .888 W |
| Bottom | Lat: 49° 51' .651 N  |
|        | Lon: 125° 09' .012 W |
| Finish | Lat: 49° 51' .472 N  |
|        | Lon: 125° 09' .155 W |

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: Q039 Event #: 94 Vessel: NEOTON UTC Date (dd|mmm|yyyy): 15 | 06 | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |    |  |  |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|----|--|--|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl a |    |  |  |  |  |  |  |  |  |  |          |
| 1                 |          | 285      | 20                | ✓ 20                 |   |     |     | X     |    |  |  |  |  |  |  |  |  |  |          |
| 2                 |          | 286      | 10                | ✓ 10                 |   |     |     | XX    |    |  |  |  |  |  |  |  |  |  |          |
| 3                 |          | 287      | 8fc               | ✓ 2.3                |   |     |     | X     | XX |  |  |  |  |  |  |  |  |  |          |
| 4                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 5                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 6                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 7                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 8                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 9                 |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 10                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                      |   |     |     |       |    |  |  |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):

Bottom Depth: m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 21 : 27 14 : 27  
Bottom (BO) 21 : 32 14 : 37  
End (EN) : :

Positional Information  
Start Lat: 50 ° 01 .850 N  
Lon: 125 ° 05 .489 W  
Bottom Lat: 50 ° 01 .843 N  
Lon: 125 ° 05 .467 W  
Finish Lat: 50 ° . N  
Lon: 125 ° . W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)



Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: 22 Event #: 98 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 16 | Jul | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |       |    |       |  |  | Comments |  |  |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|-----|-------|----|-------|--|--|----------|--|--|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl a | WPC | Phyto | DA | Phyto |  |  |          |  |  |
| 1                 |          | 288      | 20                | ✓ 20                 |   |     |     | X     |     |       |    |       |  |  |          |  |  |
| 2                 |          | 289      | 10                | ✓ 10                 |   |     |     | XX    |     |       |    |       |  |  |          |  |  |
| 3                 |          | 290      | 5ft               | ✓ 1.8                |   |     |     | X     | XX  | X     | X  |       |  |  |          |  |  |
| 4                 |          | 291*     | 60                | ✓ 59                 |   |     |     | X     | XX  |       |    | X     |  |  |          |  | 2 <sup>nd</sup> peck in fluorescence profile sampled |
| 5                 |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 6                 |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 7                 |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 8                 |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 9                 |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 10                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 11                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 12                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 13                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 14                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 15                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 16                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 17                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 18                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 19                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 20                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 21                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 22                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 23                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |
| 24                |          |          |                   |                      |   |     |     |       |     |       |    |       |  |  |          |  |  |

Profile type:  
Ros (default) | TrMetIRos | X-Niskin  
Watchkeeper(s):  
RICKMCKY

Bottom Depth: 355 m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N  
Time UTC Local  
Start (BE) 02 :35 19 :35  
Bottom (BO) 02 :42 19 :42  
End (EN) 02 :52 19 :52

Positional Information  
Start  
Lat: 49 ° 40 . 111 N  
Lon: 124 ° 16 . 340 W  
Bottom  
Lat: 49 ° 40 . 119 N  
Lon: 124 ° 16 . 364 W  
Finish  
Lat: 49 ° 40 . 115 N  
Lon: 124 ° 16 . 432 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)

Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: BS-17 Event #: 126 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 17 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                    | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |      |     |  |  |  |  |  |  |  | Comments                 |
|-------------------|----------|----------|-------------------|--------------------|---|-----|-----|-------|------|-----|--|--|--|--|--|--|--|--------------------------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed Pressure | Oxy   | Nut | Sal | Chl-a | Ious | DOC |  |  |  |  |  |  |  |                          |
| 1                 | 1        | 291      | BS-17             | ✓ 44.7             | x   | x   | x   |       | x    | x   |  |  |  |  |  |  |  | 9291 b/c 291 on event 98 |
| 2                 | 2        | 292      | 50                | ✓ 44.7             | x   | x   |     |       | xx   | x   |  |  |  |  |  |  |  |                          |
| 3                 | 3        | 293      | 40                | ✓ 40               | xx  | x   |     |       | x    | xx  |  |  |  |  |  |  |  |                          |
| 4                 | 4        | 294      | 30                | ✓ 30               | x   | x   |     |       | x    | x   |  |  |  |  |  |  |  |                          |
| 5                 | 5        | 295      | 20                | ✓ 20               | x   | x   | x   |       | x    | x   |  |  |  |  |  |  |  |                          |
| 6                 | 6        | 296      | 10                | ✓ 10               | x   | xx  |     |       | x    | xx  |  |  |  |  |  |  |  |                          |
| 7                 | 7        | 297      | 5                 | ✓ 5                | x   | x   | x   |       | x    | x   |  |  |  |  |  |  |  |                          |
| 8                 | 8        | 298      | SRF               | ✓ 2.0              | x   | x   | x   |       | x    | x   |  |  |  |  |  |  |  |                          |
| 9                 |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 10                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 11                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 12                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 13                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 14                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 15                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 16                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 17                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 18                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 19                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 20                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 21                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 22                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 23                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |
| 24                |          |          |                   |                    |   |     |     |       |      |     |  |  |  |  |  |  |  |                          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
  
MB

Bottom Depth: \_\_\_\_\_ m  
Transmisso Cleaned: Y / N  
Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 22:26 | :     |
| Bottom (BO) | 22:27 | :     |
| End (EN)    | 22:33 | :     |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 49° 29.033  | N |
| Lon: | 124° 46.240 | W |

Start

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49° 29.022  | N |
| Lon: | 124° 46.244 | W |

Bottom

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49° 29.016  | N |
| Lon: | 124° 46.256 | W |

Finish

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
  
SALINITY TAKEN  
AS REQUEST BY  
DEBBY JANSON



Water Properties Group

Sampling/Rosette Log

Institute of Ocean Sciences, Ocean Sciences Division

Cruise ID: 2018-30 Station: BS-2 Event #: 128 Vessel: VECTOR UTC Date (dd|mmm|yyyy): 18 | Jun | 2018

| Bottles & Samples |          |          | Rosette Operation |                      | Samples Taken (↓ write samplers' initials under each sample type) |     |     |       |     |     |  |  |  |  |  |  |  | Comments |
|-------------------|----------|----------|-------------------|----------------------|---|-----|-----|-------|-----|-----|--|--|--|--|--|--|--|----------|
| Niskin #          | Firing # | Sample # | Target Pressure   | Confirmed ✓ Pressure | Oxy   | Nut | Sal | Chl-a | SWS | DEC |  |  |  |  |  |  |  |          |
| 1                 | 1        | 299      | BOT-10            | ✓ 28                 | xx  | xx  | x   |       | x   | x   |  |  |  |  |  |  |  |          |
| 2                 | 2        | 300      | Z0                | ✓ 20                 | x   | x   |     |       | x   | xx  |  |  |  |  |  |  |  |          |
| 3                 | 3        | 301      | 10                | ✓ 10                 | ✓   | x   | x   |       | xx  | x   |  |  |  |  |  |  |  |          |
| 4                 | 4        | 302      | 5                 | ✓ 5                  | x   | x   | x   |       | x   | xx  |  |  |  |  |  |  |  |          |
| 5                 | 5        | 303      | SRE               | ✓ 28                 | x   | x   | x   |       | x   | x   |  |  |  |  |  |  |  |          |
| 6                 |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 7                 |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 8                 |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 9                 |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 10                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 11                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 12                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 13                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 14                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 15                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 16                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 17                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 18                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 19                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 20                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 21                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 22                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 23                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |
| 24                |          |          |                   |                      |   |     |     |       |     |     |  |  |  |  |  |  |  |          |

Profile type:  
Ros (default) | TrMetlRos | X-Niskin  
Watchkeeper(s):  
MB

Bottom Depth: 33 m  
Transmisso Cleaned: (Y) N  
Fluorometer Cleaned: Y / N

| Time        | UTC   | Local |
|-------------|-------|-------|
| Start (BE)  | 15:02 | :     |
| Bottom (BO) | 15:04 | :     |
| End (EN)    | 15:08 | :     |

Positional Information  
Start  
Lat: 49° 38' . 452 N  
Lon: 124° 53' . 706 W

Bottom  
Lat: 49° 38' . 455 N  
Lon: 124° 53' . 707 W

Finish  
Lat: 49° 38' . 461 N  
Lon: 124° 53' . 710 W

Extra comments: (e.g., DMS cast, PAR on, Heavy Rain, Niskins out of order, etc)  
SALINITY TAKEN  
AS REQUESTED BY  
DGBB/ JASON