

## Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID:

2018-31

Station:

SI

Event #:

1

Ship:

Vector

UTC Date (dd mmm yyyy): 27 SEP 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |     |  |  |  |  | Comments                                               |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-----|--|--|--|--|--------------------------------------------------------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | DIC |  |  |  |  |                                                        |
| 1        | 1        | 1        | B-5               | ✓ 181              | xx                                 | x   |     |       |      |     |  |  |  |  |                                                        |
| 2        | 2        | 2        | 100               | ✓ 100              | x                                  | xx  | x   |       |      | x   |  |  |  |  |                                                        |
| 3        | 3        | 3        | 75                | ✓ 75               | xx                                 | x   |     |       |      |     |  |  |  |  |                                                        |
| 4        | 4        | 4        | 50                | ✓ 50               | x                                  | x   |     |       |      |     |  |  |  |  |                                                        |
| 5        | 5        | 5        | 40                | ✓ 40               | x                                  | xx  |     |       |      |     |  |  |  |  |                                                        |
| 6        | 6        | 6        | 30                | ✓ 30               | x                                  | x   |     |       |      |     |  |  |  |  |                                                        |
| 7        | 7        | 7        | 20                | ✓ 20               | x                                  | x   |     | x     |      |     |  |  |  |  |                                                        |
| 8        | 8        | 8        | 10                | ✓ 10               | x                                  | x   |     | xx    |      |     |  |  |  |  |                                                        |
| 9        | 9        | 9        | 5                 | ✓ 5                | x                                  | x   |     |       |      |     |  |  |  |  |                                                        |
| 10       | 10       | 10       | SFC               | ✓ 1.0              | x                                  | x   |     | x     | xx   |     |  |  |  |  | FLUOR: UNKNOWN<br>FLUOROMETER NOT<br>LOADING CORRECTOR |
| 11       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 12       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 13       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 14       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 15       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 16       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 17       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 18       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 19       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 20       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 21       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 22       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 23       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |
| 24       |          |          |                   |                    |                                    |     |     |       |      |     |  |  |  |  |                                                        |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): MB

Bottom Depth: 188 m  
Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0428 | 2128  |
| Bottom | 0433 |       |
| End    | 0450 |       |

Positional Information

|       |                     |
|-------|---------------------|
| Start | Lat: 48 ° 39 091 N  |
|       | Lon: 123 ° 30 550 W |

Bottom

|                     |
|---------------------|
| Lat: 48 ° 39 095 N  |
| Lon: 123 ° 30 598 W |

End

|                    |
|--------------------|
| Lat: 48 ° 39 109 N |
| Lon: 13 ° 30 581 W |

Extra comments:  
TRIPPED ALL  
BOTTLES FOR  
INTEGRITY TEST

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 59 Event #: 2 Ship: Vector UTC Date (dd:mmm/yyyy): 27 Sep 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |     |  |  | Comments  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|-----|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB | DIC |  |  |           |
| 1        | 1        | 11       | B-5               | ✓ 230              | x                                  | x   |     |       |      |       |    |     | x   |  |  |           |
| 2        | 2        | 12       | 200               | ✓ 199              | x                                  | x   | x   |       |      |       |    |     | x   |  |  |           |
| 3        | 3        | 13       | 175               | ✓ 175              | x                                  | x   |     |       |      |       |    |     |     |  |  |           |
| 4        | 4        | 14       | 150               | ✓ 150              | xx                                 | x   |     |       |      |       |    |     | x   |  |  |           |
| 5        | 5        | 15       | 125               | ✓ 125              | x                                  | x   |     |       |      |       |    |     |     |  |  |           |
| 6        | 6        | 16       | 100               | ✓ 100              | x                                  | x   |     |       |      |       |    |     | x   |  |  |           |
| 7        | 7        | 17       | 75                | ✓ 78               | x                                  | x   |     |       |      |       |    |     | x   |  |  |           |
| 8        | 8        | 18       | 50                | ✓ 50               | x                                  | x   |     |       |      |       |    |     | x   |  |  |           |
| 9        | 9        | 19       | 40                | ✓ 40               | x                                  | x   |     |       |      |       |    |     |     |  |  |           |
| 10       | 10       | 20       | 30                | ✓ 30               | x                                  | x   |     |       |      |       |    |     | xx  |  |  |           |
| 11       | 11       | 21       | 20                | ✓ 20               | xx                                 | x   |     | x     |      |       |    |     | x   |  |  |           |
| 12       | 12       | 22       | 10                | ✓ 10               | x                                  | xx  |     | xx    |      |       |    |     | x   |  |  |           |
| 13       | 13       | 23       | 5                 | ✓ 5                | x                                  | x   |     |       |      |       |    |     | x   |  |  |           |
| 14       | 14       | 24       | SFC               | 1.6 ✓              | x                                  | xx  |     |       |      |       |    |     | xx  |  |  |           |
| 15       | 15       | 25       | SFC               | 1.6 ✓              |                                    |     |     | x     | xx   | x     | x  | x   |     |  |  | FLUOR: <2 |
| 16       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 17       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 18       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |           |

Profile type:  
ROS TRM X-Niskin other?  
Watchkeeper(s): MB

Bottom Depth: 233 m  
Transmisso Cleaned: Y / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 07 08 | 00 08 |
| Bottom | 07 13 |       |
| End    | 07    |       |

Positional Information

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 37 788  | N |
| Lon: | 123 ° 14 563 | W |

Start

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 37 776  | N |
| Lon: | 123 ° 14 540 | W |

Bottom

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 37 831  | N |
| Lon: | 123 ° 14 282 | W |

End

Extra comments:  
TRIP ALL REMAINING  
BOTTLES @ SFC FOR  
INTEGRITY TEST

# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31

Station: 102

Event #: 7

Ship: Vector

UTC Date (dd|mmm|yyyy): 27|SEP|2008

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  |  |  | Comments  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB |  |  |  |  |           |
| 1        | 1        | 26       | B-5               | ✓ 252              | xx                                 | xx  |     |       |      |       |    |     |  |  |  |  |           |
| 2        | 2        | 27       | 200               | ✓ 200              | x                                  | x   | x   |       |      |       |    |     |  |  |  |  |           |
| 3        | 3        | 28       | 175               | ✓ 175              | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 4        | 4        | 29       | 150               | ✓ 150              | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 5        | 5        | 30       | 125               | ✓ 125              | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 6        | 6        | 31       | 100               | ✓ 100              | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 7        | 7        | 32       | 75                | ✓ 75               | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 8        | 8        | 33       | 50                | ✓ 50               | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 9        | 9        | 34       | 40                | ✓ 40               | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 10       | 10       | 35       | 30                | ✓ 30               | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 11       | 11       | 36       | 20                | ✓ 20               | x                                  | x   |     | x     |      |       |    |     |  |  |  |  |           |
| 12       | 12       | 37       | 10                | ✓ 10               | x                                  | xx  |     | xx    |      |       |    |     |  |  |  |  |           |
| 13       | 13       | 38       | 5                 | ✓ 5                | x                                  | x   |     |       |      |       |    |     |  |  |  |  |           |
| 14       | 14       | 39       | SFC               | ✓ 2.4              | xx                                 | x   |     |       |      |       |    |     |  |  |  |  |           |
| 15       | 15       | 40       | SFC               | ✓ 2.5              |                                    |     |     | x     | xx   | x     | x  | x   |  |  |  |  |           |
| 16       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  | FLUOR: <2 |
| 17       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 18       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |  |           |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): MB

Bottom Depth: 260 m  
 Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1901 | 1201  |
| Bottom | 1906 |       |
| End    | 1922 |       |

Positional Information

|       |                     |
|-------|---------------------|
| Start | Lat: 48 ° 30 029 N  |
|       | Lon: 124 ° 43 969 W |

Bottom

|  |                     |
|--|---------------------|
|  | Lat: 48 ° 30 091 N  |
|  | Lon: 124 ° 44 003 W |

End

|  |                     |
|--|---------------------|
|  | Lat: 48 ° 30 182 N  |
|  | Lon: 124 ° 43 976 W |

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID:

2018-31

Station:

75

Event #:

11

Ship:

Vector

UTC Date (dd:mmm/yyyy):

27 SEP 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |           |
| 1        | 1        | 41       | B-5               | ✓ 218              | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 2        | 2        | 42       | 200               | ✓ 201              | x                                  | x   | x   |       |      |  |  |  |  |  |           |
| 3        | 3        | 43       | 175               | ✓ 176              | xx                                 | x   |     |       |      |  |  |  |  |  |           |
| 4        | 4        | 44       | 150               | ✓ 150              | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 5        | 5        | 45       | 125               | ✓ 125              | xx                                 | x   |     |       |      |  |  |  |  |  |           |
| 6        | 6        | 46       | 100               | ✓ 101              | x                                  | xx  |     |       |      |  |  |  |  |  |           |
| 7        | 7        | 47       | 75                | ✓ 75               | x                                  | xx  |     |       |      |  |  |  |  |  |           |
| 8        | 8        | 48       | 50                | ✓ 50               | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 9        | 9        | 49       | 40                | ✓ 40               | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 10       | 10       | 50       | 30                | ✓ 30               | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 11       | 11       | 51       | 20                | ✓ 20               | x                                  | x   |     | xx    |      |  |  |  |  |  |           |
| 12       | 12       | 52       | 10                | ✓ 10               | x                                  | x   |     | x     |      |  |  |  |  |  |           |
| 13       | 13       | 53       | 5                 | ✓ 5                | x                                  | x   |     |       |      |  |  |  |  |  |           |
| 14       | 14       | 54       | SFC               | ✓ 1.7              | x                                  | x   |     | x     | xx   |  |  |  |  |  | FLUOR: <2 |
| 15       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 16       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 17       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 18       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 19       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 20       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 21       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 22       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 23       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 24       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): MS

Bottom Depth: 226 m  
 Transmisso Cleaned: ☒ Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2340 | 1640  |
| Bottom | 2344 |       |
| End    | 2358 |       |

Positional Information

|      |          |     |   |
|------|----------|-----|---|
| Lat: | 48 ° 28  | 214 | N |
| Lon: | 124 ° 32 | 807 | W |

Start

|      |          |     |   |
|------|----------|-----|---|
| Lat: | 48 ° 28  | 216 | N |
| Lon: | 124 ° 32 | 778 | W |

Bottom

|      |          |     |   |
|------|----------|-----|---|
| Lat: | 48 ° 28  | 208 | N |
| Lon: | 124 ° 32 | 502 | W |

End

Extra comments:

Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 72 Event #: 14 Ship: Vector UTC Date (dd|mmm|yyyy): 28|Sep|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |     |  |  |           | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|-----|--|--|-----------|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | DIC | HAB |  |  |           |          |
| 1        | 1        | 55       | B-5               | ✓ 181                | xx                                 | x   |     |       |      |       |    | x   |     |  |  |           |          |
| 2        | 2        | 56       | 175               | ✓ 175                | x                                  | xx  | x   |       |      |       |    |     |     |  |  |           |          |
| 3        | 3        | 57       | 150               | ✓ 150                | x                                  | x   |     |       |      |       |    | x   |     |  |  |           |          |
| 4        | 4        | 58       | 125               | ✓ 125                | xx                                 | x   |     |       |      |       |    |     |     |  |  |           |          |
| 5        | 5        | 59       | 100               | ✓ 100                | x                                  | x   |     |       |      |       |    | x   |     |  |  |           |          |
| 6        | 6        | 60       | 75                | ✓ 75                 | x                                  | xx  |     |       |      |       |    | x   |     |  |  |           |          |
| 7        | 7        | 61       | 50                | ✓ 50                 | x                                  | x   |     |       |      |       |    | xx  |     |  |  |           |          |
| 8        | 8        | 62       | 40                | ✓ 40                 | x                                  | x   |     |       |      |       |    |     |     |  |  |           |          |
| 9        | 9        | 63       | 30                | ✓ 30                 | x                                  | x   |     |       |      |       |    | x   |     |  |  |           |          |
| 10       | 10       | 64       | 20                | ✓ 20                 | x                                  | x   |     | xx    |      |       |    | x   |     |  |  |           |          |
| 11       | 11       | 65       | 10                | ✓ 10                 | x                                  | x   |     | x     |      |       |    | x   |     |  |  |           |          |
| 12       | 12       | 66       | 5                 | ✓ 5                  | x                                  | x   |     |       |      |       |    | x   |     |  |  |           |          |
| 13       | 13       | 67       | SFC               | ✓ 1.5                | x                                  | x   |     |       |      |       |    | xx  |     |  |  |           |          |
| 14       | 14       | 68       | SFC               | ✓ 1.4                |                                    |     |     | x     | xx   | x     | x  |     | x   |  |  | FLUOR: 22 |          |
| 15       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 16       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 17       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 18       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |     |  |  |           |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MB/KY/KS

Bottom Depth: 190 m

Transmisso Cleaned: (Y) N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 04:33 | 21:33 |
| Bottom | 04:37 | 21:37 |
| End    | 04:51 | 21:51 |

Positional Information

Start

Lat: 48 ° 18.673 N

Lon: 124 ° 4.099 W

Bottom

Lat: 48 ° 18.745 N

Lon: 124 ° 4.240 W

End

Lat: 48 ° 18.961 N

Lon: 124 ° 4.596 W

Extra comments:



Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 69 Event #: 18 Ship: Vector UTC Date (dd|mmm|yyyy): 28|Sept|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments |  |        |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|----------|--|--------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |          |  |        |
| 1        |          | 69       | B-5               | ✓ 175                | x                                  | x   |     |       |      |  |  |  |  |  |          |  |        |
| 2        |          | 70       | 150               | ✓                    | x                                  | x   | x   |       |      |  |  |  |  |  |          |  |        |
| 3        |          | 71       | 125               | ✓                    | xx                                 | x   |     |       |      |  |  |  |  |  |          |  |        |
| 4        |          | 72       | 100               | ✓                    | x                                  | xx  |     |       |      |  |  |  |  |  |          |  |        |
| 5        |          | 73       | 75                | ✓                    | xx                                 | x   |     |       |      |  |  |  |  |  |          |  |        |
| 6        |          | 74       | 50                | ✓                    | x                                  | x   |     |       |      |  |  |  |  |  |          |  |        |
| 7        |          | 75       | 40                | ✓ 42                 | x                                  | x   |     |       |      |  |  |  |  |  |          |  |        |
| 8        |          | 76       | 30                |                      | x                                  | x   |     |       |      |  |  |  |  |  |          |  |        |
| 9        |          | 77       | 20                |                      | x                                  | xx  |     | xx    |      |  |  |  |  |  |          |  |        |
| 10       |          | 78       | 10                |                      | x                                  | x   |     | x     |      |  |  |  |  |  |          |  |        |
| 11       |          | 79       | 5                 |                      | x                                  | x   |     |       |      |  |  |  |  |  |          |  |        |
| 12       |          | 80       | SFC               |                      | x                                  | x   |     | x     | xx   |  |  |  |  |  |          |  | FLUOR: |
| 13       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 14       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 15       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 16       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 17       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 18       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 19       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 20       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 21       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 22       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 23       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |
| 24       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |        |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): CR

Bottom Depth: 182 m  
Transmisso Cleaned: Y / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 08:40 | 01:40 |
| Bottom | 08:44 | 01:44 |
| End    | 09:01 | 02:01 |

Positional Information  
Start  
Lat: 48 ° 15.653 N  
Lon: 123 ° 43.644 W

Bottom  
Lat: 48 ° 15.644 N  
Lon: 123 ° 43.205 W

End  
Lat: 48 ° 15.631 N  
Lon: 123 ° 43.212 W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: ADCP Event #: 21 Ship: Vector UTC Date (dd|mmm|yyyy): 28 | Sept | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB |  |  |  |  |          |
| 1        |          | 81       | B-5               | ✓ 118                | x                                  | x   |     |       |      |       |    |     |  |  |  |  |          |
| 2        |          | 82       | 100               | ✓                    | xx                                 | x   | x   |       |      |       |    |     |  |  |  |  |          |
| 3        |          | 83       | 75                | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |          |
| 4        |          | 84       | 50                | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |          |
| 5        |          | 85       | 40                | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |          |
| 6        |          | 86       | 30                | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |          |
| 7        |          | 87       | 20                | ✓                    | xx                                 | x   |     | x     |      |       |    |     |  |  |  |  |          |
| 8        |          | 88       | 10                | ✓                    | x                                  | x   |     | xx    |      |       |    |     |  |  |  |  |          |
| 9        |          | 89       | 5                 | ✓                    | x                                  | xx  |     |       |      |       |    |     |  |  |  |  |          |
| 10       |          | 90       | SFC               | ✓                    | x                                  | xx  |     |       |      |       |    |     |  |  |  |  |          |
| 11       |          | 91       | SFC               | ✓                    |                                    |     |     | x     | xx   | x     | x  | x   |  |  |  |  | FLUOR:   |
| 12       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |          |

Profile type:  
 ROS ☒ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SR

Bottom Depth: 125 m  
 Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1250 | 0550  |
| Bottom | 1254 |       |
| End    | 1304 |       |

Positional Information

|       |                    |
|-------|--------------------|
| Start | Lat: 48° 14.010 N  |
|       | Lon: 123° 17.939 W |

Bottom

|  |                    |
|--|--------------------|
|  | Lat: 48° 14.005 N  |
|  | Lon: 123° 17.910 W |

End

|  |                    |
|--|--------------------|
|  | Lat: 48° 13.919 N  |
|  | Lon: 123° 17.735 W |

Extra comments:

# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31

Station: 65

Event #: 25

Ship: Vector

UTC Date (dd|mmm|yyyy): 28|Sept|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |          |
| 1        |          | 92       | B-5               | ✓ 125                                                  | xx                                 | x   |     |       |      |  |  |  |  |  |          |
| 2        |          | 93       | 100               | ✓ 98                                                   | x                                  | x   | x   |       |      |  |  |  |  |  |          |
| 3        |          | 94       | 75                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 4        |          | 95       | 50                |                                                        | x                                  | xx  |     |       |      |  |  |  |  |  |          |
| 5        |          | 96       | 40                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 6        |          | 97       | 30                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 7        |          | 98       | 20                |                                                        | x                                  | x   |     | x     |      |  |  |  |  |  |          |
| 8        |          | 99       | 10                |                                                        | xx                                 | x   |     | xx    |      |  |  |  |  |  |          |
| 9        |          | 100      | 5                 |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 10       |          | 101      | SFC               |                                                        | x                                  | xx  |     | x     | xx   |  |  |  |  |  |          |
| 11       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  | FLUOR:   |
| 12       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 13       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 14       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 15       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 16       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 17       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 18       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 19       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 20       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 21       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 22       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 23       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 24       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): SR

Bottom Depth: 132 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1541 | 0941  |
| Bottom | 1544 |       |
| End    | 1556 |       |

Positional Information

Start

Lat: 48 ° 15.884 N

Lon: 123 ° 9.882 W

Bottom

Lat: 48 ° 15.853 N

Lon: 123 ° 9.943 W

End

Lat: 48 ° 15.709 N

Lon: 123 ° 10.163 W

Extra comments:



# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31

Station: 63

Event #: 28

Ship: Vector

UTC Date (dd|mmm|yyyy): 28|Sept|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB |  |  |          |
| 1        |          | 102      | 20                |                      |                                    | x   |     | x     |      |       |    |     |  |  |          |
| 2        |          | 103      | 10                |                      |                                    | x   |     | x     |      |       |    |     |  |  |          |
| 3        |          | 104      | SFC               |                      |                                    | x   |     | xx    | xx   | x     | x  | x   |  |  |          |
| 4        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  | FLUOR:   |
| 5        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 6        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 7        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 8        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 9        |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 10       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 11       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 12       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 13       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 14       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 15       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 16       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 17       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 18       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |          |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SR

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

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1713 | 1013  |
| Bottom | 1717 |       |
| End    | 1722 |       |

Positional Information  
 Start  
 Lat: 48° 14.597' N  
 Lon: 122° 58.525' W

Bottom  
 Lat: 48° 14.596' N  
 Lon: 122° 58.523' W

End  
 Lat: 48° 14.596' N  
 Lon: 122° 58.512' W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 62 Event #: 23 Ship: Vector UTC Date (dd|mmm|yyyy): 28 | 8 | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments |  |              |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|----------|--|--------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |          |  |              |
| 1        | 1        | 105      | B-5               | ✓ 145                | x                                  | x   |     |       |      |  |  |  |  |  |          |  |              |
| 2        | 2        | 106      | 125               | ✓ 125                | x                                  | x   | x   |       |      |  |  |  |  |  |          |  |              |
| 3        | 3        | 107      | 100               | ✓ 100                | x                                  | x   |     |       |      |  |  |  |  |  |          |  |              |
| 4        | 4        | 108      | 75                | ✓ 75                 | x                                  | x   |     |       |      |  |  |  |  |  |          |  |              |
| 5        | 5        | 109      | 50                | ✓ 50                 | x                                  | x   |     |       |      |  |  |  |  |  |          |  |              |
| 6        | 6        | 110      | 40                | ✓ 40                 | x                                  | x   |     |       |      |  |  |  |  |  |          |  |              |
| 7        | 7        | 111      | 30                | ✓ 30                 | xx                                 | x   |     |       |      |  |  |  |  |  |          |  |              |
| 8        | 8        | 112      | 20                | ✓ 20                 | x                                  | x   |     | x     |      |  |  |  |  |  |          |  |              |
| 9        | 9        | 113      | 10                | ✓ 10                 | x                                  | xx  |     | xx    |      |  |  |  |  |  |          |  |              |
| 10       | 10       | 114      | 5                 | ✓ 5                  | x                                  | xx  |     |       |      |  |  |  |  |  |          |  |              |
| 11       | 11       | 115      | SFC               | ✓ 1.1                | xx                                 | x   |     | x     | xx   |  |  |  |  |  |          |  | FLUOR: < 2.0 |
| 12       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 13       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 14       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 15       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 16       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 17       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 18       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 19       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 20       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 21       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 22       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 23       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |
| 24       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |          |  |              |

Profile type:  
ROS TRM X-Niskin other?  
Watchkeeper(s): MB

Bottom Depth: 152 m  
Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1908 | 1208  |
| Bottom | 1911 |       |
| End    | 1922 |       |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 22 804 | N |
| Lon: | 123 ° 2 78  | W |

Bottom

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 22 780 | N |
| Lon: | 123 ° 2 744 | W |

End

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 22 666 | N |
| Lon: | 123 ° 2 814 | W |

Extra comments:  
Chg'd FLUOROMETER

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 56 Event #: 36 Ship: Vector UTC Date (dd|mmm|yyyy): 23|Sep|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  |  | Comments   |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB |  |  |  |            |
| 1        | 1        | 116      | B-5               | ✓ 203              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 2        | 2        | 117      | 200               | ✓ 200              | x                                  | x   | x   |       |      |       |    |     |  |  |  |            |
| 3        | 3        | 118      | 175               | ✓ 175              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 4        | 4        | 119      | 150               | ✓ 150              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 5        | 5        | 120      | 125               | ✓ 125              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 6        | 6        | 121      | 100               | ✓ 100              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 7        | 7        | 122      | 75                | ✓ 75               | xx                                 | x   |     |       |      |       |    |     |  |  |  |            |
| 8+9      | 8+9      | 123      | 50                | ✓ 50               | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 9        | 10       | 124      | 40                | ✓ 40               | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 10       | 11       | 125      | 30                | ✓ 30               | x                                  | xx  |     |       |      |       |    |     |  |  |  |            |
| 11       | 12       | 126      | 20                | ✓ 20               | x                                  | x   |     | x     |      |       |    |     |  |  |  |            |
| 12       | 13       | 127      | 10                | ✓ 10               | xx                                 | x   |     | x     |      |       |    |     |  |  |  |            |
| 13       | 14       | 128      | 5                 | ✓ 5                | x                                  | xx  |     |       |      |       |    |     |  |  |  |            |
| 14       | 15       | 129      | SFC               | ✓ 1.1              | x                                  | x   |     |       |      |       |    |     |  |  |  |            |
| 15       | 16       | 130      | SFC               | ✓ 1.1              |                                    |     |     | xx    | xx   | x     | x  | x   |  |  |  | FLUOR: 2-5 |
| 16       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 17       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 18       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |  |  |  |            |

Profile type:  
 ROS TRM X-Niskin other?  
 Watchkeeper(s): MB

Bottom Depth: 228 m  
 Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0620 | 1120  |
| Bottom | 0624 |       |
| End    | 0638 |       |

Positional Information

|      |                |
|------|----------------|
| Lat: | 48 ° 46 39 N   |
| Lon: | 123 ° 01 829 W |

Start

Bottom

End

|      |                |
|------|----------------|
| Lat: | 48 ° 46 248 N  |
| Lon: | 123 ° 01 034 W |

|      |                |
|------|----------------|
| Lat: | 48 ° 46 246 N  |
| Lon: | 123 ° 01 656 W |

Extra comments:  
 8+9  
 Trapped together  
 Bump every thing up 2 nicks after 8.



# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID:

2018-31

Station:

46

Event #:

44

Ship:

Vector

UTC Date (dd|mmm|yyyy):

29 Sept 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |  |  | Comments |  |  |  |  |  |  |  |            |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|--|--|----------|--|--|--|--|--|--|--|------------|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |          |  |  |  |  |  |  |  |            |  |
| 1        |          | 131      | B-5               | ✓ 173                | xx                                 | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 2        |          | 132      | 150               | ✓                    | x                                  | xx  | x   |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 3        |          | 133      | 125               | ✓                    | x                                  | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 4        |          | 134      | 100               | ✓                    | x                                  | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 5        |          | 135      | 75                | ✓                    | xx                                 | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 6        |          | 136      | 50                | ✓                    | x                                  | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 7        |          | 137      | 40                | ✓                    | x                                  | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 8        |          | 138      | 30                | ✓                    | x                                  | x   |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 9        |          | 139      | 20                | ✓                    | x                                  | x   |     | x     |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 10       |          | 140      | 10                | ✓                    | x                                  | x   |     | xx    |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 11       |          | 141      | 5                 | ✓                    | x                                  | xx  |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 12       |          | 142      | SFC               | ✓                    | x                                  | x   |     | x     | xx   |  |  |          |  |  |  |  |  |  |  | FLUOR: 1.2 |  |
| 13       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 14       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 15       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 16       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 17       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 18       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 19       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 20       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 21       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 22       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 23       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |
| 24       |          |          |                   |                      |                                    |     |     |       |      |  |  |          |  |  |  |  |  |  |  |            |  |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SR

Bottom Depth: 178 m  
 Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1201 | 0501  |
| Bottom | 1205 |       |
| End    |      |       |

Positional Information  
 Start  
 Lat: 48° 51.384 N  
 Lon: 123° 10.763 W

Bottom  
 Lat: 48° 51.410 N  
 Lon: 123° 10.799 W

End  
 Lat: 48° 51.481 N  
 Lon: 123° 19.030 W

Extra comments:



# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 42 Event #: 47 Ship: Vector UTC Date (dd|mmm|yyyy): 29|07|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |     |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|-----|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB | DIC |  |  |  |          |
| 1        |          | 143      | B-5               | ✓                  | 319                                | x   | x   |       |      |       |    |     |     |  |  |  |          |
| 2        |          | 144      | 300               | ✓                  | 300                                | x   | x   | x     |      |       |    |     | x   |  |  |  |          |
| 3        |          | 145      | 250               | ✓                  |                                    | x   | x   |       |      |       |    |     |     |  |  |  |          |
| 4        |          | 146      | 200               | ✓                  |                                    | xx  | x   |       |      |       |    |     | x   |  |  |  |          |
| 5        |          | 147      | 175               | ✓                  |                                    | x   | xx  |       |      |       |    |     | x   |  |  |  |          |
| 6        |          | 148      | 150               | ✓                  |                                    | x   | x   |       |      |       |    |     |     |  |  |  |          |
| 7        |          | 149      | 125               | ✓                  |                                    | xx  | xx  |       |      |       |    |     | x   |  |  |  |          |
| 8        |          | 150      | 100               | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 9        |          | 151      | 75                | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 10       |          | 152      | 50                | ✓                  |                                    | x   | x   |       |      |       |    |     | xx  |  |  |  |          |
| 11       |          | 153      | 40                | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 12       |          | 154      | 30                | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 13       |          | 155      | 20                | ✓                  |                                    | x   | x   |       | x    |       |    |     | x   |  |  |  |          |
| 14       |          | 156      | 10                | ✓                  |                                    | x   | x   |       | xx   |       |    |     | xx  |  |  |  |          |
| 15       |          | 157      | 5                 | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 16       |          | 158      | SFC               | ✓                  |                                    | x   | x   |       |      |       |    |     | x   |  |  |  |          |
| 17       |          | 159      | SFC               | ✓                  |                                    |     |     |       |      |       |    |     | x   |  |  |  |          |
| 18       |          |          |                   |                    |                                    |     |     | x     | xx   | x     | x  | x   |     |  |  |  | FLUOR:   |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |          |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SR

Bottom Depth: 322 m  
 Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1613 | 0913  |
| Bottom | 1621 |       |
| End    | 1640 |       |

Positional Information  
 Start  
 Lat: 49 ° 1.834 N  
 Lon: 123 ° 26.494 W

Bottom  
 Lat: 49 ° 1.880 N  
 Lon: 123 ° 26.557 W

End  
 Lat: 49 ° 1.908 N  
 Lon: 123 ° 26.636 W

Extra comments:

# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 39 Event #: 56 Ship: Vector UTC Date (dd/mm/yyyy): 29 Sep 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments     |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|--------------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |              |
| 1        | 1        | 160      | B-5               | ✓ 370              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 2        | 2        | 161      | 350               | ✓ 350              | x                                  | x   | x   |       |      |  |  |  |  |  |              |
| 3        | 3        | 162      | 300               | ✓ 300              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 4        | 4        | 163      | 250               | ✓ 250              | x                                  | xx  |     |       |      |  |  |  |  |  |              |
| 5        | 5        | 164      | 200               | ✓ 200              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 6        | 6        | 165      | 175               | ✓ 175              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 7        | 7        | 166      | 150               | ✓ 150              | xx                                 | x   |     |       |      |  |  |  |  |  |              |
| 8        | 8        | 167      | 125               | ✓ 125              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 9        | 9        | 168      | 100               | ✓ 100              | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 10       | 10       | 169      | 75                | ✓ 75               | xx                                 | xx  |     |       |      |  |  |  |  |  |              |
| 11       | 11       | 170      | 50                | ✓ 50               | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 12       | 12       | 171      | 40                | ✓ 40               | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 13       | 13       | 172      | 30                | ✓ 30               | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 14       | 14       | 173      | 20                | ✓ 20               | x                                  | x   |     | x     |      |  |  |  |  |  |              |
| 15       | 15       | 174      | 10                | ✓ 10               | x                                  | x   |     | x     |      |  |  |  |  |  |              |
| 16       | 16       | 175      | 5                 | ✓ 5                | x                                  | x   |     |       |      |  |  |  |  |  |              |
| 17       | 17       | 176      | SFC               | ✓ 1.1              | x                                  | x   |     | xx    | xx   |  |  |  |  |  | FLUOR: < 2.0 |
| 18       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 19       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 20       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 21       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 22       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 23       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |
| 24       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |              |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin other?  
 Watchkeeper(s): MB

Bottom Depth: 373 m  
 Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2154 | 1454  |
| Bottom | 2201 |       |
| End    | 2219 |       |

Positional Information

|                     |
|---------------------|
| Lat: 49 ° 9 850 N   |
| Lon: 123 ° 32 975 W |

Bottom

|                     |
|---------------------|
| Lat: 49 ° 9 2856 N  |
| Lon: 123 ° 32 935 W |

End

|                     |
|---------------------|
| Lat: 49 ° 9 865 N   |
| Lon: 123 ° 32 860 W |

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: GEO1 Event #: 61 Ship: Vector UTC Date (dd|mm|yyyy): 30 | Sep | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |            |
| 1        | 1        | 177      | 20                | <input checked="" type="checkbox"/> 20                 |                                    | x   |     | x     |      |  |  |  |  |  |            |
| 2        | 2        | 178      | 10                | <input checked="" type="checkbox"/> 10                 |                                    | xx  |     | x     |      |  |  |  |  |  |            |
| 3        | 3        | 179      | SFC               | <input checked="" type="checkbox"/> 13                 |                                    | x   |     | xx    | xx   |  |  |  |  |  | FLUOR: 2-5 |
| 4        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 5        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 6        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 7        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 8        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 9        |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 10       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 11       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 12       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 13       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 14       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 15       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 16       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 17       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 18       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 19       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 20       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 21       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 22       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 23       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |
| 24       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |            |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): MB

Bottom Depth: 4101 m  
 Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0110 | 1810  |
| Bottom | 0119 |       |
| End    | 0129 |       |

Positional Information

Start  
 Lat: 49 ° 14 996 N  
 Lon: 123 ° 44 94 W

Bottom  
 Lat: 49 ° 14 996 N  
 Lon: 123 ° 45 026 W

End  
 Lat: 49 ° 14 989 N  
 Lon: 123 ° 45 123 W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 27 Event #: 63 Ship: Vector UTC Date (dd|mmm|yyyy): 30 | Sep | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |     |    | Comments |  |  |        |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|-----|----|----------|--|--|--------|--|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB | DIC |    |          |  |  |        |  |
|          |          |          |                   | ✓                  |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 1        | 1        | 180      | B-5               | ✓                  | 342                                | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 2        | 2        | 181      | 300               | ✓                  | 300                                | x   | x   | x     |      |       |    |     |     | xx |          |  |  |        |  |
| 3        | 3        | 182      | 250               | ✓                  | 250                                | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 4        | 4        | 183      | 200               | ✓                  | 200                                | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 5        | 5        | 184      | 175               | ✓                  | 175                                | xx  | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 6        | 6        | 185      | 150               | ✓                  | 150                                | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 7        | 7        | 186      | 125               | ✓                  | 125                                | x   | xx  |       |      |       |    |     |     | x  |          |  |  |        |  |
| 8        | 8        | 187      | 100               | ✓                  | 100                                | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 9        | 9        | 188      | 75                | ✓                  | 75                                 | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 10       | 10       | 189      | 50                | ✓                  | 50                                 | xx  | x   |       |      |       |    |     |     | xx |          |  |  |        |  |
| 11       | 11       | 190      | 40                | ✓                  | 40                                 | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 12       | 12       | 191      | 30                | ✓                  | 30                                 | x   | xx  |       |      |       |    |     |     | xx |          |  |  |        |  |
| 13       | 13       | 192      | 20                | ✓                  | 20                                 | x   | x   |       | xx   |       |    |     |     | x  |          |  |  |        |  |
| 14       | 14       | 193      | 10                | ✓                  | 10                                 | x   | x   |       | x    |       |    |     |     | x  |          |  |  |        |  |
| 15       | 15       | 194      | 5                 | ✓                  | 5                                  | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 16       | 16       | 195      | SFC               |                    | 1                                  | x   | x   |       |      |       |    |     |     | x  |          |  |  |        |  |
| 17       | 17       | 196      | SFC               |                    | +                                  |     |     |       | x    | xx    | x  | x   | x   |    |          |  |  | FLUOR: |  |
| 18       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |    |          |  |  |        |  |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): MB

Bottom Depth: 345 m

Transmissio Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 02:58 | 19:58 |
| Bottom | 03:05 | 20:05 |
| End    | 03:23 |       |

Positional Information

Start Lat: 49 ° 19.148 N

Start Lon: 123 ° 47.975 W

Bottom Lat: 49 ° 19.105 N

Bottom Lon: 123 ° 47.965 W

End Lat: 49 ° 18.977 N

End Lon: 123 ° 47.848 W

Extra comments:



# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: CPF1 Event #: 67 Ship: Vector UTC Date (dd|mmm|yyyy): 30 | Sep | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |  |  |            |
| 1        | 1        | 197      | 20                | ✓ 20                 |                                    | x   |     | x     |      |  |  |  |  |  |  |  |            |
| 2        | 2        | 198      | 10                | ✓ 10                 |                                    | x   |     | xx    |      |  |  |  |  |  |  |  |            |
| 3        | 3        | 199      | SFC               | ✓ 12                 |                                    | x   |     | x     | xx   |  |  |  |  |  |  |  | FLUOR: 2-5 |
| 4        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 5        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 6        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 7        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 8        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 9        |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 10       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 11       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 12       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 13       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 14       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 15       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 16       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 17       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 18       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 19       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 20       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 21       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 22       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 23       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |
| 24       |          |          |                   |                      |                                    |     |     |       |      |  |  |  |  |  |  |  |            |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): MB

Bottom Depth: 244 m  
 Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0636 | 2336  |
| Bottom | 0640 |       |
| End    | 0647 |       |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 21 972 | N |
| Lon: | 124 ° 4 978 | W |

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 21 985 | N |
| Lon: | 124 ° 4 915 | W |

▼

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 27 002 | N |
| Lon: | 124 ° 4 813 | W |

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 2 Event #: 68 Ship: Vector UTC Date (dd|mmm|yyyy): 30 Sept 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  |  |  | Comments    |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | PHYTO | DA | HAB |  |  |  |  |             |
| 1        |          | 200      | B-5               | ✓ 274                | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 2        |          | 201      | 250               | ✓                    | x                                  | x   | x   |       |      |       |    |     |  |  |  |  |             |
| 3        |          | 202      | 200               | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 4        |          | 203      | 175               | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 5        |          | 204      | 150               | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 6        |          | 205      | 125               | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 7        |          | 206      | 100               | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 8        |          | 207      | 75                | ✓                    | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 9        |          | 208      | 50                | ✓                    | xx                                 | xx  |     |       |      |       |    |     |  |  |  |  |             |
| 10       |          | 209      | 40                |                      | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 11       |          | 210      | 30                |                      | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 12       |          | 211      | 20                |                      | x                                  | xx  |     | x     |      |       |    |     |  |  |  |  |             |
| 13       |          | 212      | 10                |                      | x                                  | x   |     | x     |      |       |    |     |  |  |  |  |             |
| 14       |          | 213      | 5                 |                      | xx                                 | x   |     |       |      |       |    |     |  |  |  |  |             |
| 15       |          | 214      | SFC               |                      | x                                  | x   |     |       |      |       |    |     |  |  |  |  |             |
| 16       |          | 215      | SFC               |                      |                                    |     |     | xx    | xx   | x     | x  | x   |  |  |  |  | FLUOR: 1.25 |
| 17       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 18       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |  |  |             |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): SL

Bottom Depth: 278 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0720 | 0020  |
| Bottom | 0726 |       |
| End    | 0744 |       |

Positional Information

Start Lat: 49 ° 24.126 N

Lon: 124 ° 9.299 W

Bottom Lat: 49 ° 24.144 N

Lon: 124 ° 9.288 W

End Lat: 49 ° 24.158 N

Lon: 124 ° 9.259 W

Extra comments:

# Water Properties Group

## Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 3 Event #: 71 Ship: Vector UTC Date (dd|mmm|yyyy): 30 | Sept | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |          |
| 1        |          | 216      | B-5               | 315                                                    | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 2        |          | 217      | 300               |                                                        | x                                  | x   | x   |       |      |  |  |  |  |  |          |
| 3        |          | 218      | 250               |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 4        |          | 219      | 200               |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 5        |          | 220      | 175               |                                                        | xx                                 |     |     |       |      |  |  |  |  |  |          |
| 6        |          | 221      | 150               |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 7        |          | 222      | 125               |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 8        |          | 223      | 100               |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 9        |          | 224      | 75                |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 10       |          | 225      | 50                |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 11       |          | 226      | 40                |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 12       |          | 227      | 30                |                                                        | x                                  |     |     |       |      |  |  |  |  |  |          |
| 13       |          | 228      | 20                |                                                        | x                                  |     |     | x     |      |  |  |  |  |  |          |
| 14       |          | 229      | 10                |                                                        | x                                  | x   |     | xx    |      |  |  |  |  |  |          |
| 15       |          | 230      | 5                 |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 16       |          | 231      | SFC               |                                                        | xx                                 | xx  |     | x     | xx   |  |  |  |  |  | FLUOR:   |
| 17       |          |          |                   |                                                        | N                                  |     |     |       |      |  |  |  |  |  |          |
| 18       |          |          |                   |                                                        | O                                  |     |     |       |      |  |  |  |  |  |          |
| 19       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 20       |          |          |                   |                                                        | O                                  |     |     |       |      |  |  |  |  |  |          |
| 21       |          |          |                   |                                                        | X                                  |     |     |       |      |  |  |  |  |  |          |
| 22       |          |          |                   |                                                        | Y                                  |     |     |       |      |  |  |  |  |  |          |
| 23       |          |          |                   |                                                        | S                                  |     |     |       |      |  |  |  |  |  |          |
| 24       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |

Profile type:  
 ROS TRM X-Niskin other?  
 Watchkeeper(s): SR

Bottom Depth: m  
 Transmisso Cleaned: Y/N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 10:05 | 0305  |
| Bottom | 1013  |       |
| End    | 1032  |       |

Positional Information

|      |               |
|------|---------------|
| Lat: | 49° 26.620 N  |
| Lon: | 124° 20.186 W |

Bottom

|      |               |
|------|---------------|
| Lat: | 49° 26.579 N  |
| Lon: | 124° 20.104 W |

End

|      |               |
|------|---------------|
| Lat: | 49° 26.554 N  |
| Lon: | 124° 19.946 W |

Extra comments:



Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 6 Event #: 74 Ship: Vector UTC Date (dd|mmm|yyyy): 30 | Sept | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Samples Taken / Sampler's Initials |     |     |       |      |    |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-----|-------|------|----|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |    |  |  |  |  |            |
| 1        |          | 232      | B-5               | <input checked="" type="checkbox"/>                    | 187                                | x   | x   |       |      |    |  |  |  |  |            |
| 2        |          | 233      | 175               | <input checked="" type="checkbox"/>                    |                                    | x   | x   | x     |      |    |  |  |  |  |            |
| 3        |          | 234      | 150               | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 4        |          | 235      | 125               | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 5        |          | 236      | 100               | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 6        |          | 237      | 75                | <input checked="" type="checkbox"/>                    |                                    | xx  | x   |       |      |    |  |  |  |  |            |
| 7        |          | 238      | 50                | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 8        |          | 239      | 40                | <input checked="" type="checkbox"/>                    |                                    | x   | xx  |       |      |    |  |  |  |  |            |
| 9        |          | 240      | 30                | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 10       |          | 241      | 20                | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       | x    |    |  |  |  |  |            |
| 11       |          | 242      | 10                | <input checked="" type="checkbox"/>                    |                                    | xx  | x   |       | x    |    |  |  |  |  |            |
| 12       |          | 243      | 5                 | <input checked="" type="checkbox"/>                    |                                    | x   | x   |       |      |    |  |  |  |  |            |
| 13       |          | 244      | SFC               | <input checked="" type="checkbox"/>                    |                                    | x   | xx  |       | xx   | xx |  |  |  |  |            |
| 14       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  | FLUOR: 0.7 |
| 15       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 16       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 17       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 18       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 19       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 20       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 21       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 22       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 23       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |
| 24       |          |          |                   |                                                        |                                    |     |     |       |      |    |  |  |  |  |            |

Profile type: ROS TRM X-Niskin other?  
Watchkeeper(s): SR

Bottom Depth: 192 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 12:27 | 0527  |
| Bottom | 1231  |       |
| End    | 1246  |       |

Positional Information  
Start  
Lat: 49 ° 30.601 N  
Lon: 124 ° 27.893 W

Bottom  
Lat: 49 ° 30.614 N  
Lon: 124 ° 27.845 W

End  
Lat: 49 ° 30.572 N  
Lon: 124 ° 27.649 W

Extra comments:



Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 9 Event #: 77 Ship: Vector UTC Date (dd|mmm|yyyy): 30|Sept|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |          |
| 1        |          | 245      | B-5               | V165                                                   | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 2        |          | 246      | 150               |                                                        | xx                                 | x   | x   |       |      |  |  |  |  |  |          |
| 3        |          | 247      | 125               |                                                        | x                                  | xx  |     |       |      |  |  |  |  |  |          |
| 4        |          | 248      | 100               |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 5        |          | 249      | 75                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 6        |          | 250      | 50                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 7        |          | 251      | 40                |                                                        | xx                                 | x   |     |       |      |  |  |  |  |  |          |
| 8        |          | 252      | 30                |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 9        |          | 253      | 20                |                                                        | x                                  | xx  |     | xx    |      |  |  |  |  |  |          |
| 10       |          | 254      | 10                |                                                        | x                                  | x   |     | x     |      |  |  |  |  |  |          |
| 11       |          | 255      | 5                 |                                                        | x                                  | x   |     |       |      |  |  |  |  |  |          |
| 12       |          | 256      | SFC               |                                                        | x                                  | x   |     | x     | xx   |  |  |  |  |  | FLUOR:   |
| 13       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 14       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 15       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 16       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 17       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 18       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 19       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 20       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 21       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 22       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 23       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |
| 24       |          |          |                   |                                                        |                                    |     |     |       |      |  |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?  
Watchkeeper(s):

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

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1535 | 0835  |
| Bottom | 1539 |       |
| End    |      |       |

Positional Information

|      |                |
|------|----------------|
| Lat: | 49 ° 35.503 N  |
| Lon: | 124 ° 38.292 W |

Bottom

|      |                |
|------|----------------|
| Lat: | 49 ° 35.495 N  |
| Lon: | 124 ° 38.272 W |

End

|      |                |
|------|----------------|
| Lat: | 49 ° 35.408 N  |
| Lon: | 124 ° 38.209 W |

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 12 Event #: 82 Ship: Vector UTC Date (dd|mmm|yyyy): 30 | Sep | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |     |  |  |  | Comments  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|-----|--|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | Phyto | DA | HAB | DIC |  |  |  |           |
| 1        | 1        | 257      | B-5               | ✓                  | 353                                | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 2        | 2        | 258      | 300               | ✓                  | 300                                | x   | x   | x     |      |       |    |     |     |  |  |  |           |
| 3        | 3        | 259      | 250               | ✓                  | 250                                | x   | xx  |       |      |       |    |     | x   |  |  |  |           |
| 4        | 4        | 260      | 200               | ✓                  | 200                                | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 5        | 5        | 261      | 175               | ✓                  | 175                                | x   | x   |       |      |       |    |     |     |  |  |  |           |
| 6        | 6        | 262      | 150               | ✓                  | 150                                | xx  | xx  |       |      |       |    |     | x   |  |  |  |           |
| 7        | 7        | 263      | 125               | ✓                  | 125                                | x   | x   |       |      |       |    |     | xx  |  |  |  |           |
| 8        | 8        | 264      | 100               | ✓                  | 100                                | xx  | x   |       |      |       |    |     | xx  |  |  |  |           |
| 9        | 9        | 265      | 75                | ✓                  | 75                                 | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 10       | 10       | 266      | 50                | ✓                  | 50                                 | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 11       | 11       | 267      | 40                | ✓                  | 40                                 | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 12       | 12       | 268      | 30                | ✓                  | 30                                 | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 13       | 13       | 269      | 20                | ✓                  | 20                                 | x   | x   |       | xx   |       |    |     | x   |  |  |  |           |
| 14       | 14       | 270      | 10                | ✓                  | 10                                 | x   | x   |       | x    |       |    |     | x   |  |  |  |           |
| 15       | 15       | 271      | 5                 | ✓                  | 5                                  | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 16       | 16       | 272      | SFC               | ✓                  | 1.1                                | x   | x   |       |      |       |    |     | x   |  |  |  |           |
| 17       | 17       | 273      | SFC               | ✓                  | 1.1                                |     |     |       | x    | xx    | x  | x   | x   |  |  |  | FLUOR: <2 |
| 18       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 19       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 20       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 21       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 22       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 23       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |
| 24       |          |          |                   |                    |                                    |     |     |       |      |       |    |     |     |  |  |  |           |

Profile type:  
 (ROS) TRM X-Niskin other?  
 Watchkeeper(s): MS

Bottom Depth: 356 m  
 Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1846 | 1146  |
| Bottom | 1853 |       |
| End    | 1911 |       |

Positional Information

|      |                |
|------|----------------|
| Lat: | 49 ° 43 600 N  |
| Lon: | 124 ° 40 744 W |

Bottom

|      |                |
|------|----------------|
| Lat: | 49 ° 43 584 N  |
| Lon: | 124 ° 40 676 W |

End

|      |                |
|------|----------------|
| Lat: | 49 ° 43 595 N  |
| Lon: | 124 ° 40 597 W |

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 14 Event #: 86 Ship: Vector UTC Date (dd|mmm|yyyy): 30 Sep 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |  |  | Comments   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|----|-----|--|--|------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | Phyto | DA | HAB |  |  |            |
| 1        | 1        | 274      | B-5               | ✓ 306                | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 2        | 2        | 275      | 250               | ✓ 250                | x                                  | x   | x   |       |      |       |    |     |  |  |            |
| 3        | 3        | 276      | 200               | ✓ 200                | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 4        | 4        | 277      | 175               | ✓ 175                | x                                  | xx  |     |       |      |       |    |     |  |  |            |
| 5        | 5        | 278      | 150               | ✓ 150                | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 6        | 6        | 279      | 125               | ✓ 125                | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 7        | 7        | 280      | 100               | ✓ 100                | xx                                 | x   |     |       |      |       |    |     |  |  |            |
| 8        | 8        | 281      | 75                | ✓ 75                 | xx                                 | x   |     |       |      |       |    |     |  |  |            |
| 9        | 9        | 282      | 50                | ✓ 50                 | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 10       | 10       | 283      | 40                | ✓ 40                 | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 11       | 11       | 284      | 30                | ✓ 30                 | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 12       | 12       | 285      | 20                | ✓ 20                 | x                                  | x   |     | xx    |      |       |    |     |  |  |            |
| 13       | 13       | 286      | 10                | ✓ 10                 | x                                  | xx  |     | x     |      |       |    |     |  |  |            |
| 14       | 14       | 287      | 5                 | ✓ 5                  | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 15       | 15       | 288      | SFC               | ✓ 1.1                | x                                  | x   |     |       |      |       |    |     |  |  |            |
| 16       | 16       | 289      | SFC               | ✓ 1.1                |                                    |     |     | x     | xx   | x     | x  | x   |  |  | FLUOR: 2-5 |
| 17       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 18       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |    |     |  |  |            |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): MB

Bottom Depth: 308 m  
 Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2227 | 1527  |
| Bottom | 2232 |       |
| End    | 2252 |       |

Positional Information

|      |                |
|------|----------------|
| Lat: | 49 ° 52 620 N  |
| Lon: | 124 ° 59 218 W |

Bottom

|      |                |
|------|----------------|
| Lat: | 49 ° 52 586 N  |
| Lon: | 124 ° 59 180 W |

End

|      |                |
|------|----------------|
| Lat: | 49 ° 52 428 N  |
| Lon: | 124 ° 59 026 W |

Extra comments:



Water Properties Group

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: 16 Event #: 88 Ship: Vector UTC Date (dd|mmm|yyyy): 1 OCT 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |     |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-----|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | DIC |  |  |  |  |            |
| 1        | 1        | 290      | B-5               | ✓ 152                | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 2        | 2        | 291      | 125               | ✓ 125                | x                                  | x   | x   |       |      | xx  |  |  |  |  |            |
| 3        | 3        | 292      | 100               | ✓ 100                | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 4        | 4        | 293      | 75                | ✓ 75                 | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 5        | 5        | 294      | 50                | ✓ 50                 | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 6        | 6        | 295      | 40                | ✓ 41                 | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 7        | 7        | 296      | 30                | ✓ 30                 | xx                                 | xx  |     |       |      | x   |  |  |  |  |            |
| 8        | 8        | 297      | 20                | ✓ 20                 | xx                                 | xx  |     | xx    |      | x   |  |  |  |  |            |
| 9        | 9        | 298      | 10                | ✓ 10                 | x                                  | x   |     | x     |      | x   |  |  |  |  |            |
| 10       | 10       | 299      | 5                 | ✓ 5                  | x                                  | x   |     |       |      | x   |  |  |  |  |            |
| 11       | 11       | 300      | SFC               | ✓ 1.0                | x                                  | x   |     |       |      | xx  |  |  |  |  |            |
| 12       | 12       | 301      | SFC               | ✓ 1.0                |                                    |     |     | x     | xx   |     |  |  |  |  | FLUOR: 2-5 |
| 13       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 14       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 15       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 16       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 17       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 18       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 19       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 20       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 21       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 22       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 23       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |
| 24       |          |          |                   |                      |                                    |     |     |       |      |     |  |  |  |  |            |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): MR

Bottom Depth: 155 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0039 | 1739  |
| Bottom | 0042 |       |
| End    | 0054 |       |

Positional Information  
Start  
Lat: 49 ° 57 715 N  
Lon: 125 ° 8 934 W

Bottom  
Lat: 49 ° 57 742 N  
Lon: 125 ° 8 981 W

End  
Lat: 49 ° 57 646 N  
Lon: 125 ° 9 322 W

Extra comments:



# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: QU39 Event #: 90 Ship: Vector UTC Date (dd|mmm|yyyy): 1 | OCT | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |            |
| 1        | 1        | 302      | 20                | ✓ 70               |                                    | x   |     | x     |      |  |  |  |  |  |            |
| 2        | 2        | 303      | 10                | ✓ 10               |                                    | x   |     | xx    |      |  |  |  |  |  |            |
| 3        | 3        | 304      | SFC               | ✓ 1.1              |                                    | x   |     | x     | xx   |  |  |  |  |  | FLUOR: 2-5 |
| 4        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 5        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 6        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 7        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 8        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 9        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 10       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 11       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 12       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 13       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 14       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 15       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 16       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 17       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 18       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 19       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 20       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 21       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 22       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 23       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |
| 24       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |            |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): mb

Bottom Depth: 274 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0208 | 1908  |
| Bottom | 0214 |       |
| End    | 0221 |       |

**Positional Information**

Start  
 Lat: 50 ° 1 804 N  
 Lon: 125 ° 5 387 W

Bottom  
 Lat: 50 ° 1 805 N  
 Lon: 125 ° 5 478 W

End  
 Lat: 50 ° 1 901 N  
 Lon: 125 ° 5 576 W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: PEN1 Event #: 94 Ship: Vector UTC Date (dd|mmm|yyyy): 01|Oct|2018

| Niskin # | Firing # | Sample # | Rosette Operation                                                           |                      | Samples Taken / Sampler's Initials |     |     |       |      |     |      |    |  |  | Comments |  |  |        |  |  |  |  |  |  |  |  |  |
|----------|----------|----------|-----------------------------------------------------------------------------|----------------------|------------------------------------|-----|-----|-------|------|-----|------|----|--|--|----------|--|--|--------|--|--|--|--|--|--|--|--|--|
|          |          |          | Target Pressure                                                             | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | DIC | IONS |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 1        |          | 305      | B-5                                                                         | ✓                    | 160                                | x   | xx  |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 2        |          | 306      | 150                                                                         |                      |                                    | x   | x   | X     |      |     | x    | xx |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 3        |          | 307      | 125                                                                         |                      |                                    | xx  | x   |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 4        |          | 308      | 100                                                                         |                      |                                    | x   | x   |       |      |     | xx   | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 5        |          | 309      | 75                                                                          |                      |                                    | x   | x   |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 6        |          | 310      | 50                                                                          |                      |                                    | x   | x   |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 7        |          | 311      | 40                                                                          |                      |                                    | x   | xx  |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 8        |          | 312      | 30                                                                          |                      |                                    | x   | x   |       |      |     | xx   | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 9        |          | 313      | 20                                                                          |                      |                                    | xx  | x   |       | x    |     | x    | xx |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 10       |          | 314      | 10                                                                          |                      |                                    | x   | x   |       | xx   |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 11       |          | 315      | 5                                                                           |                      |                                    | x   | x   |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 12       |          | 316      | 3.5                                                                         |                      |                                    |     |     |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 13       |          | 317      | 2                                                                           |                      |                                    |     |     |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 14       |          | 318      | SFC                                                                         |                      |                                    | x   | x   |       |      |     | x    | x  |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 15       |          | 319      | SFC                                                                         |                      |                                    |     |     |       | x    | xx  |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 16       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 17       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 18       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  | FLUOR: |  |  |  |  |  |  |  |  |  |
| 19       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 20       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 21       |          |          | Transmissometer to be cleaned before each cast, do not use Ammonia products |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 22       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 23       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |
| 24       |          |          |                                                                             |                      |                                    |     |     |       |      |     |      |    |  |  |          |  |  |        |  |  |  |  |  |  |  |  |  |

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

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

Watchkeeper(s): SR

Bottom Depth: 165 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1337 | 0637  |
| Bottom | 1340 |       |
| End    | 1357 |       |

Positional Information

Start

Lat: 50 ° 17.044 N

Lon: 124 ° 42.5 W

Bottom

Lat: 50 ° 17.051 N

Lon: 124 ° 42.596 W

End

Lat: 50 ° 17.040 N

Lon: 124 ° 42.811 W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: PEN2 Event #: 96 Ship: Vector UTC Date (dd|mmm|yyyy): 01|Oct|2018

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Samples Taken / Sampler's Initials |     |     |       |      |       |     |    |     |      |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|------|-------|-----|----|-----|------|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Oxy                                | Nut | Sal | Chl a | HPLC | Phyto | HAB | DA | DIC | IONS |  |  |          |
| 1        |          | 320      | B-5               | 284                  | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 2        |          | 321      | 250               |                      | xx                                 | x   | x   |       |      |       |     |    | x   | x    |  |  |          |
| 3        |          | 322      | 200               |                      | x                                  | x   |     |       |      |       |     |    | x   | xx   |  |  |          |
| 4        |          | 323      | 175               |                      | xx                                 | x   |     |       |      |       |     |    | xx  | x    |  |  |          |
| 5        |          | 324      | 150               |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 6        |          | 325      | 125               |                      | x                                  | xx  |     |       |      |       |     |    | x   | x    |  |  |          |
| 7        |          | 326      | 100               |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 8        |          | 327      | 75                |                      | x                                  | x   |     |       |      |       |     |    | x   | xx   |  |  |          |
| 9        |          | 328      | 50                |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 10       |          | 329      | 40                |                      | x                                  | xx  |     |       |      |       |     |    | x   | x    |  |  |          |
| 11       |          | 330      | 30                |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 12       |          | 331      | 20                |                      | x                                  | x   |     | xx    |      |       |     |    | xx  | x    |  |  |          |
| 13       |          | 332      | 10                |                      | x                                  | x   |     | x     |      |       |     |    | x   | x    |  |  |          |
| 14       |          | 333      | 5                 |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  |          |
| 15       |          | 334      | 3.5               |                      |                                    |     |     |       |      |       |     |    | x   | x    |  |  |          |
| 16       |          | 335      | 2                 |                      |                                    |     |     |       |      |       |     |    | x   | x    |  |  |          |
| 17       |          | 336      | SFC               |                      | x                                  | x   |     |       |      |       |     |    | x   | x    |  |  | FLUOR:   |
| 18       |          | 337      | SFC               |                      |                                    |     |     | x     | xx   | x     | x   | x  |     |      |  |  |          |
| 19       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |
| 20       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |
| 21       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |
| 22       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |
| 23       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |
| 24       |          |          |                   |                      |                                    |     |     |       |      |       |     |    |     |      |  |  |          |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SR

Bottom Depth: 287 m  
 Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1504 | 0804  |
| Bottom | 1510 |       |
| End    | 1536 |       |

Positional Information  
 Start  
 Lat: 50° 14.758 N  
 Lon: 124° 44.029 W

Bottom  
 Lat: 50° 14.788 N  
 Lon: 124° 43.996 W

End  
 Lat: 50° 14.934 N  
 Lon: 124° 43.750 W

Extra comments:

# Water Properties Group

# Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Cruise ID: 2018-31 Station: PEN3 Event #: 97 Ship: Vector UTC Date (dd|mmm|yyyy): 11 Oct 2018

| Niskin # | Firing # | Sample # | Rosette Operation |            | Samples Taken / Sampler's Initials |     |     |       |      |    |  |  |  |  | Comments |  |  |        |
|----------|----------|----------|-------------------|------------|------------------------------------|-----|-----|-------|------|----|--|--|--|--|----------|--|--|--------|
|          |          |          | Target Pressure   | Confirmed  | Oxy                                | Nut | Sal | Chl a | HPLC |    |  |  |  |  |          |  |  |        |
|          |          |          |                   | ✓ Pressure |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 1        |          | 338      | B-5               | ✓ 417      | x                                  | x   |     |       |      |    |  |  |  |  |          |  |  |        |
| 2        |          | 339      | 300               |            |                                    | x   | x   | x     |      |    |  |  |  |  |          |  |  |        |
| 3        |          | 340      | 250               |            |                                    | x   | xx  |       |      |    |  |  |  |  |          |  |  |        |
| 4        |          | 341      | 200               |            |                                    | x   | xx  |       |      |    |  |  |  |  |          |  |  |        |
| 5        |          | 342      | 175               |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 6        |          | 343      | 150               |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 7        |          | 344      | 125               |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 8        |          | 345      | 100               |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 9        |          | 346      | 75                |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 10       |          | 347      | 50                |            |                                    | xx  | x   |       |      |    |  |  |  |  |          |  |  |        |
| 11       |          | 348      | 40                |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 12       |          | 349      | 30                |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 13       |          | 350      | 20                |            |                                    | x   | x   |       | x    |    |  |  |  |  |          |  |  |        |
| 14       |          | 351      | 10                |            |                                    | x   | x   |       | xx   |    |  |  |  |  |          |  |  |        |
| 15       |          | 352      | 5                 |            |                                    | x   | x   |       |      |    |  |  |  |  |          |  |  |        |
| 16       |          | 353      | SFC               |            |                                    | xx  | x   |       | x    | xx |  |  |  |  |          |  |  | FLUOR: |
| 17       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 18       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 19       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 20       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 21       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 22       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 23       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |
| 24       |          |          |                   |            |                                    |     |     |       |      |    |  |  |  |  |          |  |  |        |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): SJZ

Bottom Depth: 421 m  
 Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1624 | 0924  |
| Bottom | 1632 |       |
| End    | 1658 |       |

Positional Information

|       |                     |
|-------|---------------------|
| Start | Lat: 50 ° 12.400 N  |
|       | Lon: 124 ° 45.119 W |

Bottom

|                     |
|---------------------|
| Lat: 50 ° 12.404 N  |
| Lon: 124 ° 45.122 W |

End

|                     |
|---------------------|
| Lat: 50 ° 12.445 N  |
| Lon: 124 ° 45.134 W |

Extra comments:



Cruise ID: 2018-31 Station: 22 Event #: 99-100 Ship: Vector UTC Date (dd|mmm|yyyy): 1 | OCT | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |           | Samples Taken / Sampler's Initials |     |     |       |      |       |    |     |   |  | Comments |  |  |  |            |
|----------|----------|----------|-------------------|-----------|------------------------------------|-----|-----|-------|------|-------|----|-----|---|--|----------|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed | Oxy                                | Nut | Sal | Chl a | HPLC | Phyto | DA | HAB |   |  |          |  |  |  |            |
|          |          |          | ✓                 | Pressure  |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 1        | 1        | 353      | 354 20            | ✓         | 20                                 |     | x   |       | xx   |       |    |     |   |  |          |  |  |  |            |
| 2        | 2        | 354      | 355 10            | ✓         | 10                                 |     | x   |       | x    |       |    |     |   |  |          |  |  |  |            |
| 3        | 3        | 355      | 356 SFC           | ✓         | +                                  |     | x   |       | x    | xx    | x  | x   | x |  |          |  |  |  | FLUOR: 0.8 |
| 4        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 5        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 6        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 7        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 8        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 9        |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 10       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 11       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 12       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 13       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 14       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 15       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 16       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 17       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 18       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 19       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 20       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 21       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 22       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 23       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |
| 24       |          |          |                   |           |                                    |     |     |       |      |       |    |     |   |  |          |  |  |  |            |

Profile type: ☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): MS KYKS

Bottom Depth: 353 m  
Transmisso Cleaned: (Y) / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 22:12 | 15:12 |
| Bottom | 22:19 | 15:19 |
| End    | 22:27 | 15:27 |

Positional Information

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 40.258  | N |
| Lon: | 124 ° 16.320 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 40.342  | N |
| Lon: | 124 ° 16.405 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 40.451  | N |
| Lon: | 124 ° 16.511 | W |

Extra comments:  
Bottle #3 from Event 100 - didn't fire on #99, so redeployed

Cruise ID: 2018-31 Station: 24 Event #: 104 Ship: Vector UTC Date (dd|mmm|yyyy): 2 | OCT | 2018

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Samples Taken / Sampler's Initials |     |     |       |      |  |  |  |  |  | Comments  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|-------|------|--|--|--|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Oxy                                | Nut | Sal | Chl a | HPLC |  |  |  |  |  |           |
| 1        | 1        | 356      | 357 20            | ✓ 20               |                                    | x   |     | xx    |      |  |  |  |  |  |           |
| 2        | 2        | 357      | 358 10            | ✓ 10               |                                    | x   |     | x     |      |  |  |  |  |  |           |
| 3        | 3        | 358      | 359 SFC           | ✓ 1.1              |                                    | x   |     | x     | xx   |  |  |  |  |  | FLUOR: 42 |
| 4        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 5        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 6        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 7        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 8        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 9        |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 10       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 11       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 12       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 13       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 14       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 15       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 16       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 17       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 18       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 19       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 20       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 21       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 22       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 23       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |
| 24       |          |          |                   |                    |                                    |     |     |       |      |  |  |  |  |  |           |

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): MB

Bottom Depth: 425 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0126 | 1826  |
| Bottom | 0135 |       |
| End    | 0145 |       |

Positional Information  
Start  
Lat: 49 ° 30 730 N  
Lon: 124 ° 6 178 W

Bottom  
Lat: 49 ° 30 730 N  
Lon: 124 ° 6 196 W

End  
Lat: 49 ° 31 008 N  
Lon: 124 ° 6 204 W

Extra comments: