

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001

Station: Haro59

Event #: 3

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 31 | Jan | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |       |       |     |      | Sample Lists: Core_Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-------|-------|-----|------|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | SAL | Nut-F | Nut-C | CHL | HPLC | DIC                        |  |  |  |          |
| 1        | 1        | 1        | Bot-5             | ✓ 218              | x                                  |     | x     |       |     |      | x                          |  |  |  |          |
| 2        | 2        | 2        | 200               | ✓ 200              | xx                                 |     | x     |       |     |      | xx                         |  |  |  |          |
| 3        | 3        | 3        | 150               | ✓ 150              | x                                  |     | x     |       |     |      | x                          |  |  |  |          |
| 4        | 4        | 4        | 100               | ✓ 100              | x                                  |     | x     |       |     |      | x                          |  |  |  |          |
| 5        | 5        | 5        | 80                | ✓ 80               | x                                  |     | xx    |       |     |      | x                          |  |  |  |          |
| 6        | 6        | 6        | 60                | ✓ 60               | x                                  |     | x     |       |     |      | x                          |  |  |  |          |
| 7        | 7        | 7        | 50                | ✓ 50               | x                                  |     | x     |       | x   |      | x                          |  |  |  |          |
| 8        | 8        | 8        | 40                | ✓ 40               | xx                                 |     | x     |       | x   |      | x                          |  |  |  |          |
| 9        | 9        | 9        | 30                | ✓ 30               | x                                  |     | x     |       | x   |      | xx                         |  |  |  |          |
| 10       | 10       | 10       | 20                | ✓ 20               | x                                  |     | x     |       | x   |      | x                          |  |  |  |          |
| 11       | 11       | 11       | 10                | ✓ 10               | x                                  |     | x     |       | x   |      | x                          |  |  |  |          |
| 12       | 12       | 12       | 5                 | ✓ 5                | x                                  |     | x     |       | xx  |      | x                          |  |  |  |          |
| 13       | 13       | 13       | 0                 | ✓ 2.2              | x                                  |     | x     |       | x   | xx   | x                          |  |  |  | FL: < 2  |
| 14       |          |          |                   |                    |                                    |     |       |       |     |      |                            |  |  |  |          |
| 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  | 0548 | 2148  |
| Bottom | 0558 |       |
| End    | 0613 |       |

Positional Information  
Start  
Lat: 48 ° 36 960 N  
Lon: 123 ° 14 646 W

Bottom  
Lat: 48 ° 36 750 N  
Lon: 123 ° 14 605 W

End  
Lat: 48 ° 36 202 N  
Lon: 123 ° 14 422 W

Extra comments:

Cruise ID: 2021-001

Station: JF2

Event #: 6

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 31 | 01 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |           |     | Sampler's Initials / Samples Taken |     |       |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  | Comments           |
|----------|----------|----------|-------------------|-----------|-----|------------------------------------|-----|-------|-------|-----|------|----------------------------|--|--|--|--|--|--------------------|
|          |          |          | Target Pressure   | Confirmed |     | MG                                 | Fw  | CW    |       | CW  | CW   | KE                         |  |  |  |  |  |                    |
|          |          |          | ✓                 | Pressure  |     | OXY                                | SAL | Nut-F | Nut-C | CHL | HPLC | DIC                        |  |  |  |  |  |                    |
| 1        |          | 14       | Bot-40            | ✓         | 181 | x                                  |     | x     |       |     |      | x                          |  |  |  |  |  | CURRENT SURFACE    |
| 2        |          | 15       | 150               | ✓         | 151 | x                                  |     | x     |       |     |      | x                          |  |  |  |  |  | Hold @ 31 To RESET |
| 3        |          | 16       | 100               | ✓         | 100 | x                                  |     | x     |       |     |      | xx                         |  |  |  |  |  | SHIP               |
| 4        |          | 17       | 80                | ✓         | 81  | xx                                 |     | x     |       |     |      | x                          |  |  |  |  |  |                    |
| 5        |          | 18       | 60                | ✓         | 60  | x                                  |     | xx    |       |     |      | x                          |  |  |  |  |  |                    |
| 6        |          | 19       | 50                | ✓         | 50  | x                                  |     | x     |       | x   |      | x                          |  |  |  |  |  |                    |
| 7        |          | 20       | 30                | ✓         | 30  | x                                  |     | x     |       | x   |      | x                          |  |  |  |  |  |                    |
| 8        |          | 21       | 20                | ✓         | 21  | x                                  |     | x     |       | xx  |      | x                          |  |  |  |  |  |                    |
| 9        |          | 22       | 10                | ✓         | 10  | xx                                 |     | x     |       | x   |      | x                          |  |  |  |  |  |                    |
| 10       |          | 23       | 5                 | ✓         | 5   | x                                  |     | x     |       | x   |      | xx                         |  |  |  |  |  |                    |
| 11       |          | 24       | 0                 | ✓         | 1.5 | x                                  |     | x     |       | x   | xx   | x                          |  |  |  |  |  | <FLC1              |
| 12       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 13       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 14       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 15       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 16       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 17       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 18       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 19       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 20       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 21       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 22       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 23       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |
| 24       |          |          |                   |           |     |                                    |     |       |       |     |      |                            |  |  |  |  |  |                    |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 189 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1158 |       |
| Bottom | 1205 |       |
| End    | 1220 |       |

Positional Information

Start

Lat: 48 ° 17.96 N

Lon: 123 ° 59.90 W

Bottom

Lat: 48 ° 17.94 N

Lon: 123 ° 59.85 W

End

Lat: 48 ° 17.77 N

Lon: 123 ° 59.42 W

Extra comments:

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001 Station: P1 Event #: 10 Ship: JP Tully UTC Date (dd|mmm|yyyy): 31 | 01 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |     |       |       |     | Sample Lists: Core_Samples |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|-------|-------|-----|----------------------------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | mkc                                | OXY | SAL | Nut-F | Nut-C | CHL | HPLC                       | DIC |  |  |          |
| 1        | 1        | 25       | Bot-10            | ✓ 126                | xx                                 |     |     | x     |       |     |                            | x   |  |  |          |
| 2        | 2        | 26       | 30                | ✓ 30                 | x                                  |     |     | x     |       |     |                            | xx  |  |  |          |
| 3        | 3        | 27       | 5                 | ✓ 4-6                | x                                  |     |     | x     |       | x   | xx                         | x   |  |  | FL: 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): MGB

Bottom Depth: 130 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1948 | 1148  |
| Bottom | 1950 |       |
| End    | 1955 |       |

Positional Information  
Start  
Lat: 48 ° 34 500 N  
Lon: 125 ° 30 130 W

Bottom  
Lat: 48 ° 34 490 N  
Lon: 125 ° 30 140 W

End  
Lat: 48 ° 34 470 N  
Lon: 125 ° 30 140 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |        |        |       |     | Sample Lists: Core_Samples |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|--------|--------|-------|-----|----------------------------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | DMS                                | DMSP-d | DMSP-t | Nut-F | CHL | HPLC                       |  |  |  |  |          |
| 1        | 1        | 28       | 100               | ✓ 104                | x                                  | x      | x      | x     | x   |                            |  |  |  |  |          |
| 2        | 2        | 29       | 75                | ✓ 75                 | x                                  |        |        | x     | x   |                            |  |  |  |  |          |
| 3        | 3        | 30       | 50                | ✓ 50                 | x                                  |        |        | x     | x   |                            |  |  |  |  |          |
| 4        | 4        | 31       | 40                | ✓ 40                 | x                                  |        |        | x     | xx  |                            |  |  |  |  |          |
| 5        | 5        | 32       | 30                | ✓ 30                 | x                                  |        |        | xx    | x   | xx                         |  |  |  |  | FL: < 2  |
| 6        | 6        | 33       | 25                | ✓ 25                 | x                                  |        |        | x     | x   | xx                         |  |  |  |  |          |
| 7        | 7        | 34       | 20                | ✓ 20                 | xx                                 | xx     | xx     | x     | x   | xx                         |  |  |  |  |          |
| 8        | 8        | 35       | 15                | ✓ 15                 | x                                  |        |        | x     | x   | xx                         |  |  |  |  |          |
| 9        | 9        | 36       | 10                | ✓ 10                 | x                                  |        |        | x     | x   | xx                         |  |  |  |  |          |
| 10       | 10       | 37       | 5                 | ✓ 5                  | x                                  | x      | x      | x     | x   | xx                         |  |  |  |  |          |
| 11       |          | 38       | 0                 | 2.0                  | x                                  | x      | x      | x     | x   |                            |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |        |        |       |     |                            |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MR

Bottom Depth: 116 m

Transmisso Cleaned: Y Y N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 22 13 | 14 13 |
| Bottom | 22 15 |       |
| End    | 22 29 |       |

Positional Information

Start

Lat: 48 ° 36 070 N  
Lon: 125 ° 59 950 W

Bottom

Lat: 48 ° 36 070 N  
Lon: 125 ° 59 970 W

End

Lat: 48 ° 36 067 N  
Lon: 126 ° 0 038 W

Extra comments:

DMS

Cruise ID: 2021-001

Station: P2

Event #: 13

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 31 | JAN | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |            | Sampler's Initials / Samples Taken |       |    |    | Sample Lists: Core_Samples |    |    |    |  |  |  |     |     |       | Comments |
|----------|----------|----------|-------------------|------------|------------------------------------|-------|----|----|----------------------------|----|----|----|--|--|--|-----|-----|-------|----------|
|          |          |          | Target            | Confirmed  | MB                                 | MB/RE | MR | GC | GC                         |    |    |    |  |  |  |     |     |       |          |
|          |          |          | Pressure          | ✓ Pressure |                                    |       |    |    |                            |    |    |    |  |  |  | OXY | SAL | Nut-F |          |
| 1        | 1        | 39       | Bot-10            | ✓          | 100                                | x     |    | x  |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 2        | 2        | 40       | 100               | ✓          | 100                                | x     |    | xx |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 3        | 3        | 41       | 75                | ✓          | 76                                 | x     |    | x  |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 4        | 4        | 42       | 75                | ✓          | 76                                 | x     |    | x  |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 5        | 5        | 43       | 50                | ✓          | 50                                 | x     |    | x  |                            | x  | xx | xx |  |  |  |     |     |       |          |
| 6        | 6        | 44       | 25                | ✓          | 25                                 | xx    |    | x  |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 7        | 7        | 45       | 10                | ✓          | 11                                 | x     |    | x  |                            | xx | x  | x  |  |  |  |     |     |       |          |
| 8        | 8        | 46       | 5                 | ✓          | 6                                  | x     |    | x  |                            | x  | x  | x  |  |  |  |     |     |       |          |
| 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: 120 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 23 07 | 15 07 |
| Bottom | 23 09 |       |
| End    | 23 17 |       |

Positional Information

Start

Lat: 48 ° 36 004 N  
Lon: 125 ° 59 951 W

Bottom

Lat: 48 ° 36 008 N  
Lon: 125 ° 59 971 W

End

Lat: 48 ° 36 008 N  
Lon: 126 ° 0 014 W

Extra comments:

Deep

**Program**  
**STN List:** All\_Stns

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

Station: P3

Event #: 14

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 1 | FEB | 2021

[illegible]

Version: 13NOV2020

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

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): MS/GC

Bottom Depth: 824 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 0050       | 1650         |
| <b>Bottom</b> | 0103       |              |
| <b>End</b>    | 0117       |              |

**Positional Information**

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 37 540  | N |
| Lon: | 126 ° 20 060 | W |

|      |     |   |    |     |   |
|------|-----|---|----|-----|---|
| Lat: | 48  | ° | 37 | SSO | N |
| Lon: | 126 | ° | 19 | 990 | W |

|      |     |   |    |     |   |
|------|-----|---|----|-----|---|
| Lat: | 48  | ° | 37 | 540 | N |
| Lon: | 126 | ° | 19 | 950 | W |

**Extra comments:**

Cruise ID: 2021-001

Station: CCN

Event #: 24

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 2 | 2 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |           | Sampler's Initials / Samples Taken |     |    |  | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |             |
|----------|----------|----------|-------------------|-----------|------------------------------------|-----|----|--|---------------------------|--|--|--|--|--|--|--|----------|-------------|
|          |          |          | Target Pressure   | Confirmed | OXY                                | SAL |    |  |                           |  |  |  |  |  |  |  |          |             |
|          |          |          | ✓                 | Pressure  |                                    |     |    |  |                           |  |  |  |  |  |  |  |          |             |
| 1        |          | 48       | 100               | ✓         | 100.1                              | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 30 seconds  |
| 2        |          | 49       | 100               | ✓         | 100.1                              | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 60 seconds  |
| 3        |          | 50       | 100               | ✓         | 100.1                              | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 90 seconds  |
| 4        |          | 51       | 100               | ✓         | 100.1                              | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 120 seconds |
| 5        |          | 52       | 75                | ✓         | 75.3                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 30 seconds  |
| 6        |          | 53       | 75                | ✓         | 75.2                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 60 seconds  |
| 7        |          | 54       | 75                | ✓         | 75.2                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 90 seconds  |
| 8        |          | 55       | 75                | ✓         | 75.2                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 120 seconds |
| 9        |          | 56       | 75                | ✓         | 75.2                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 150 seconds |
| 10       |          | 57       | 40                | ✓         | 39.9                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 30 seconds  |
| 11       |          | 58       | 40                | ✓         | 40.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 60 seconds  |
| 12       |          | 59       | 40                | ✓         | 40.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 90 seconds  |
| 13       |          | 60       | 40                | ✓         | 40.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 120 seconds |
| 14       |          | 61       | 40                | ✓         | 40.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 150 seconds |
| 15       |          | 62       | 25                | ✓         | 24.9                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 30 seconds  |
| 16       |          | 63       | 25                | ✓         | 25.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 60 seconds  |
| 17       |          | 64       | 25                | ✓         | 25.1                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 90 seconds  |
| 18       |          | 65       | 25                | ✓         | 25.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 120 seconds |
| 19       |          | 66       | 25                | ✓         | 25.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 150 seconds |
| 20       |          | 67       | 10                | ✓         | 10.1                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 30 seconds  |
| 21       |          | 68       | 10                | ✓         | 10.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 60 seconds  |
| 22       |          | 69       | 10                | ✓         | 10.1                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 90 seconds  |
| 23       |          | 70       | 10                | ✓         | 10.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 120 seconds |
| 24       |          | 71       | 10                | ✓         | 10.0                               | xx  | xx |  |                           |  |  |  |  |  |  |  |          | 150 seconds |

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

Watchkeeper(s): RF

Bottom Depth: 163 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 18:39 | 10:39 |
| Bottom | 18:43 | 10:43 |
| End    | 19:02 | 11:02 |

Positional Information

Start

Lat: 49 ° 38.920 N

Lon: 126 ° 36.020 W

Bottom

Lat: 49 ° 38.920 N

Lon: 126 ° 36.016 W

End

Lat: 49 ° 38.890 N

Lon: 126 ° 35.968 W

Extra comments:

FLUSHING EXPT

Program  
STN List: All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:            P4

Event #: 33

Ship: JP Tully

UTC Date (dd mmm yyyy): 03 02 2021

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 1323 m

Transmisso Cleaned: ~~Y~~ / ~~N~~

| Time      | UTC  | Local |
|-----------|------|-------|
| Start     | 1010 | 0210  |
| Bottom MR | 1027 | 0227  |
| End       | 1035 | 0235  |

**Positional Information**

|      |                  |   |         |   |
|------|------------------|---|---------|---|
| Lat: | <del>47</del> 48 | ° | 39.0817 | N |
| Lon: | 126              | ° | 39.999. | W |

Bottom Lat: 4948 °39 0726 N  
Lon: 126 °40 0000 W

|      |       |   |        |   |
|------|-------|---|--------|---|
| Lat: | 11 48 | ° | 39 072 | N |
| Lon: | 126   | ° | 40 002 | W |

**Extra comments:**  
**TM-75**

**Water Properties Group**      Program STN List: All\_Stns      **Sampling Log**      Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC  
 Cruise ID: 2021-001      Station: P4      Event #: 35      Ship: JP Tully      UTC Date (dd|mmm|yyyy): 03|02|22

STN List: All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:            P4

Event #: 35

Ship: JP Tully

UTC Date (dd mmm yyyy): 03 02 21

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 1330 m

Transmisso Cleaned: ~~Y~~ / ~~N~~

| <b>Time</b>   | <b>UTC</b> | <b>Local</b> |
|---------------|------------|--------------|
| <b>Start</b>  | 12 22      | 0422         |
| <b>Bottom</b> | 12.57      | 0457         |
| <b>End</b>    | 1324       | 0524         |

### Positional Information

Lat: 49° 48' 38.995" N  
Lon: 126° 40' 00.8" W

|      |                             |   |
|------|-----------------------------|---|
| Lat: | <del>49</del> 48° 38' 99.5" | N |
| Lon: | 126° 40' 00.7"              | W |

|      |               |   |
|------|---------------|---|
| Lat: | 48° 38' 993"  | N |
| Lon: | 126° 40' 003" | W |

**Extra comments:**

**TM-800**

Water Properties Group

Program STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P4

Event #: 37

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 03 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |       |       |       |     |      |    | Sample Lists: Core_Samples |  |  |  | Comments                         |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-------|-------|-------|-----|------|----|----------------------------|--|--|--|----------------------------------|
|          |          |          | Target Pressure   | Confirmed Pressure | MG/HR                              | MG  | MG    | MG    | KG/HR | CW  | CW   |    |                            |  |  |  |                                  |
|          |          |          |                   | ✓                  | OXY                                | SAL | Nut-F | Nut-C | DIC   | DOC | CDOM |    |                            |  |  |  |                                  |
| 1        |          | 82       | Bot-10            | ✓                  | 1322                               | x   |       | x     | x     | x   | x    |    |                            |  |  |  |                                  |
| 2        |          | 83       | 1250              | ✓                  | 1250                               | x   | x     | xx    | xx    | x   | x    | x  |                            |  |  |  |                                  |
| 3        |          | 84       | 1250              | ✓                  | 1250                               | x   | x     | x     | x     | x   | x    | x  |                            |  |  |  |                                  |
| 4        |          | 85       | 1000              | ✓                  | 1000                               | xx  | xx    | x     | x     | x   | x    | x  |                            |  |  |  |                                  |
| 5        |          | 86       | 800               | ✓                  | 800                                | x   | x     | x     | x     | xx  | x    | x  |                            |  |  |  |                                  |
| 6        |          | 87       | 600               | ✓                  | 601                                | x   |       | x     | x     | x   | x    | x  |                            |  |  |  |                                  |
| 7        |          | 88       | 400               | ✓                  | 400                                | x   |       | x     | x     | x   | x    | x  |                            |  |  |  |                                  |
| 8        |          | 89       | 300               | ✓                  | 300                                | x   |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 9        |          | 90       | 250               | ✓                  | 250                                | xx  |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 10       |          | 91       | 200               | ✓                  | 200                                | x   |       | xx    |       | x   | x    | x  |                            |  |  |  |                                  |
| 11       |          | 92       | 175               | ✓                  | 175                                | x   |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 12       |          | 93       | 150               | ✓                  | 150                                | x   |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 13       |          | 94       | 125               | ✓                  | 125                                | xx  |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 14       |          | 95       | 100               | ✓                  | 100                                | x   |       | x     |       | x   | x    | x  |                            |  |  |  | GUSHING OUT? LEAKY SPICOT ORING? |
| 15       |          | 96       | 75                | ✓                  | 75                                 | x   |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 16       |          | 97       | 50                | ✓                  | 50                                 | x   |       | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 17       |          | 98       | 25                | ✓                  | 25                                 | x   |       | x     |       | x   | x    | xx |                            |  |  |  |                                  |
| 18       |          | 99       | 10                | ✓                  | 10                                 | x   |       | x     |       | x   | xx   | x  |                            |  |  |  |                                  |
| 19       |          | 100      | 5                 | ✓                  | 5                                  | x   | x     | x     |       | x   | x    | x  |                            |  |  |  |                                  |
| 20       |          |          |                   |                    |                                    |     |       |       |       |     |      |    |                            |  |  |  |                                  |
| 21       |          |          |                   |                    |                                    |     |       |       |       |     |      |    |                            |  |  |  |                                  |
| 22       |          |          |                   |                    |                                    |     |       |       |       |     |      |    |                            |  |  |  |                                  |
| 23       |          |          |                   |                    |                                    |     |       |       |       |     |      |    |                            |  |  |  |                                  |
| 24       |          |          |                   |                    |                                    |     |       |       |       |     |      |    |                            |  |  |  |                                  |

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

Bottom Depth: 1329 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1447 | 0647  |
| Bottom | 1509 |       |
| End    | 1548 |       |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 38.99  | N |
| Lon: | 126 ° 40 01 | W |

Start

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 38.99  | N |
| Lon: | 126 ° 40.00 | W |

Bottom

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 38.99  | N |
| Lon: | 126 ° 40.00 | W |

End

|      |             |   |
|------|-------------|---|
| Lat: | 48 ° 38.99  | N |
| Lon: | 126 ° 40.00 | W |

Extra comments:  
Deep

# Water Properties Group

Program  
STN List: All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station: P4

Event #: 38

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 03 | 02 | 21

| Event #: |          | Ship:    |                   | JP Tully           |                                    | UTC Date (dd |        |        |                              |     |      |        |      |      |  |  |          |                  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|--------------|--------|--------|------------------------------|-----|------|--------|------|------|--|--|----------|------------------|
| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |              |        |        | Sample Lists: Custom_Samples |     |      |        |      |      |  |  | Comments |                  |
|          |          |          | Target Pressure   | Confirmed Pressure | MD                                 | MB           | MA     |        |                              |     |      |        |      |      |  |  |          |                  |
|          |          |          |                   | ✓                  |                                    | DMS          | DMSP-d | DMSP-t | Nut-F                        | CHL | HPLC | Lugols | Glut | Form |  |  |          |                  |
| 1        |          | 101      | 400               | ✓                  | 401                                | x            | x      | x      | x                            |     |      |        |      |      |  |  |          |                  |
| 2        |          | 102      | 200               | ✓                  | 201                                | x            | x      | x      | x                            |     |      |        |      |      |  |  |          |                  |
| 3        |          | 103      | 150               | ✓                  | 151                                | x            | x      | x      | xx                           |     |      |        |      |      |  |  |          | STOP@160 + 2 MIN |
| 4        |          | 104      | 100               | ✓                  | 100                                | x            |        |        | x                            | x   |      |        |      |      |  |  |          |                  |
| 5        |          | 105      | 75                | ✓                  | 75                                 | x            |        |        | x                            | x   |      |        |      |      |  |  |          |                  |
| 6        |          | 106      | 60                | ✓                  | 60                                 |              |        |        | x                            | x   | xx   |        |      |      |  |  |          |                  |
| 7        |          | 107      | 50                | ✓                  | 50                                 | x            |        |        | x                            | x   | xx   |        |      |      |  |  |          |                  |
| 8        |          | 108      | 40                | ✓                  | 40                                 | x            |        |        | x                            | x   | xx   |        |      |      |  |  |          |                  |
| 9        |          | 109      | 30                | ✓                  | 30                                 | x            | x      | x      | x                            | x   | xx   |        |      |      |  |  |          |                  |
| 10       |          | 110      | 25                | ✓                  | 25                                 | x            |        |        | x                            | xx  |      |        |      |      |  |  |          |                  |
| 11       |          | 111      | 20                | ✓                  | 20                                 | xx           | xx     | xx     | x                            | x   |      |        |      |      |  |  |          |                  |
| 12       |          | 112      | 15                | ✓                  | 15                                 | x            |        |        | x                            | x   | xx   |        |      |      |  |  |          |                  |
| 13       |          | 113      | 10                | ✓                  | 10                                 | x            |        |        | x                            | x   |      |        |      |      |  |  |          |                  |
| 14       |          | 114      | 5                 | ✓                  | 5                                  | x            | x      | x      | x                            |     |      |        |      |      |  |  |          |                  |
| 15       |          | 115      | 5                 | ✓                  | 5                                  |              |        |        | x                            | x   | xx   | x      | x    | x    |  |  |          | GUSHING OUT      |
| 16       |          | 116      | 0                 | ✓                  | 0                                  | x            | x      | x      | x                            | xx  |      |        |      |      |  |  |          |                  |
| 17       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 18       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 19       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 20       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 21       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 22       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 23       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |
| 24       |          |          |                   |                    |                                    |              |        |        |                              |     |      |        |      |      |  |  |          |                  |

Version: 13NOV2020

Transmissometer

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

Bottom Depth: 1329 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1647 | 0847  |
| Bottom | 1654 |       |
| End    | 1719 |       |

Positional Information

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 48 °  | 38.99 | N |
| Lon: | 126 ° | 40.02 | W |

Start

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 48 °  | 39.00 | N |
| Lon: | 126 ° | 40.03 | W |

Bottom

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 48 °  | 39.04 | N |
| Lon: | 126 ° | 40.21 | W |

End

Extra comments:  
DMS

Water Properties Group

Program STN List: All\_Stns

Sampling Log

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

Cruise ID:

2021-001

Station:

P5

Event #:

39

Ship:

JP Tully

UTC Date (dd|mmm|yyyy):

3 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  | Comments                                  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|-------------------------------------------|
|          |          |          | Target Pressure   | Confirmed Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |                                           |
| 1        | 1        | 117      | 2005              | ✓ 2005             |                                    |       |     |      |                           |  |  |  | Bulk water for DMS                        |
| 2        | 2        | 118      | 5                 | ✓ 5                | x                                  | x     | xx  | xx   |                           |  |  |  | FL < 2                                    |
| 3        |          | 5039     | LOOP              |                    | x                                  |       | xx  |      |                           |  |  |  |                                           |
| 4        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 5        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 6        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 7        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 8        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 9        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 10       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 11       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 12       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 13       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 14       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  | TEST FIRE @ SRF - BOTTLE HAS BEEN LEAKING |
| 15       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 16       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 17       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 18       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 19       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 20       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 21       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 22       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 23       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |
| 24       |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |                                           |

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

Watchkeeper(s): MB

Bottom Depth: 2099 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1944 | 1144  |
| Bottom | 2018 |       |
| End    | 2052 |       |

| Positional Information |                     |  |
|------------------------|---------------------|--|
| Start                  | Lat: 48 ° 41 540 N  |  |
|                        | Lon: 127 ° 9 830 W  |  |
| Bottom                 | Lat: 48 ° 41 450 N  |  |
|                        | Lon: 127 ° 9 930 W  |  |
| End                    | Lat: 48 ° 41 420 N  |  |
|                        | Lon: 127 ° 10 010 W |  |

Extra comments:

Plus loops, 1xSal, 2xChl

TEST BOTTLE 14 @ SRF.

Cruise ID: 2021-001

Station: P6

Event #: 40

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 03 | 02 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  |  |  | Comments            |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|----------------------------|--|--|--|--|--|--|--|--|--|---------------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC |                            |  |  |  |  |  |  |  |  |  |                     |
| 1        | 1        | 119      | 5                 | ✓ 5                  | x                                  | x   | xx   |                            |  |  |  |  |  |  |  |  |  |                     |
| 14       | 2        | ✓        | 5                 | ✓ 5                  | ✓                                  | ✓   | ✓    |                            |  |  |  |  |  |  |  |  |  | Bottle #14 test new |
| 3        |          |          |                   |                      |                                    |     |      |                            |  |  |  |  |  |  |  |  |  | Bottle No           |
| 4        |          |          |                   |                      |                                    |     |      |                            |  |  |  |  |  |  |  |  |  | Sample taken        |
| 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): GC

Bottom Depth: 2564 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2323 | 1523  |
| Bottom | 2355 |       |
| End    | 0027 |       |

Positional Information

Start

Lat: 48 ° 44.540 N

Lon: 127 ° 40.000 W

Bottom

Lat: 48 ° 44.510 N

Lon: 127 ° 40.020 W

End

Lat: 48 ° 44.460 N

Lon: 127 ° 40.200 W

Extra comments:

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001 Station: P7 Event #: 41 Ship: JP Tully UTC Date (dd|mmm|yyyy): 4 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        | 1        | 120      | 5                 | ✓ 51                 | x                                  | x   | xx   |                            |  |  |  |  |  |  |  |          |
| 2        |          |          |                   |                      |                                    |     |      |                            |  |  |  |  |  |  |  |          |
| 3        |          |          |                   |                      |                                    |     |      |                            |  |  |  |  |  |  |  |          |
| 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): RF

Bottom Depth: 2525 m  
Transmisso Cleaned: Y N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0242 |       |
| Bottom | 0319 |       |
| End    | 0352 |       |

Positional Information  
Start  
Lat: 48 ° 46.620 N  
Lon: 128 ° 9.980 W

Bottom  
Lat: 48 ° 46.760 N  
Lon: 128 ° 10.030 W

End  
Lat: 48 ° 46.770 N  
Lon: 128 ° 10.160 W

Extra comments:

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P8

Event #: 44

Ship: JP Tully

UTC Date (dd/mm/yyyy): 4 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |    |    |    |    |    |    |    | Sample Lists: Core Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|----|----|----|----|----|----|----|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | MG                                 | RF | KS | KS | RF | RF | CW | CW |                            |  |  |  |          |
| 1        | 1        | 121      | 2000              | ✓ 1999.7           | x                                  | xx | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 2        | 2        | 122      | 1500              | ✓ 1500.7           | x                                  | x  | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 3        | 3        | 123      | 1250              | ✓ 1252.7           | xx                                 | x  | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 4        | 4        | 124      | 1000              | ✓ 1002.0           | x                                  | xx | xx | xx |    |    | x  | x  |                            |  |  |  |          |
| 5        | 5        | 125      | 800               | ✓ 800.4            | x                                  | x  | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 6        | 6        | 126      | 600               | ✓ 600.8            | x                                  |    | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 7        | 7        | 127      | 400               | ✓ 399.8            | xx                                 |    | x  | x  |    |    | x  | x  |                            |  |  |  |          |
| 8        | 8        | 128      | 300               | ✓ 300.1            | x                                  |    | x  |    |    |    | x  | x  |                            |  |  |  |          |
| 9        | 9        | 129      | 250               | ✓ 249.8            | x                                  |    | x  |    |    |    | x  | x  |                            |  |  |  |          |
| 10       | 10       | 130      | 200               | ✓ 200.7            | x                                  |    | xx |    |    |    | x  | x  |                            |  |  |  |          |
| 11       | 11       | 131      | 175               | ✓ 176.2            | x                                  |    | x  |    |    |    | x  | x  |                            |  |  |  |          |
| 12       | 12       | 132      | 150               | ✓ 150.7            | x                                  |    | x  |    |    |    | x  | x  |                            |  |  |  |          |
| 13       | 13       | 133      | 125               | ✓ 126.4            | x                                  |    | x  |    |    |    | x  | x  |                            |  |  |  |          |
| 14       | 14       | 134      | 100               | ✓ 99.9             | x                                  |    | x  |    | x  |    | x  | x  |                            |  |  |  |          |
| 15       | 15       | 135      | 75                | ✓ 75.0             | x                                  |    | x  |    | x  |    | x  | x  |                            |  |  |  |          |
| 16       | 16       | 136      | 60                | ✓ 60.1             | xx                                 |    | x  |    | x  | xx | x  | x  |                            |  |  |  |          |
| 17       | 17       | 137      | 50                | ✓ 50.6             | x                                  |    | x  |    | x  | xx | x  | x  |                            |  |  |  |          |
| 18       | 18       | 138      | 40                | ✓ 39.1             | x                                  |    | xx |    | x  | xx | x  | x  |                            |  |  |  |          |
| 19       | 19       | 139      | 30                | ✓ 31.0             | x                                  |    | x  |    | x  | xx | x  | x  |                            |  |  |  |          |
| 20       | 20       | 140      | 25                | ✓ 25.1             | x                                  |    | x  |    | x  |    | x  | x  |                            |  |  |  |          |
| 21       | 21       | 141      | 20                | ✓ 20.4             | x                                  |    | x  |    | x  |    | xx | xx |                            |  |  |  |          |
| 22       | 22       | 142      | 15                | ✓ 14.7             | x                                  |    | x  |    | x  | xx | x  | x  |                            |  |  |  |          |
| 23       | 23       | 143      | 10                | ✓ 10.5             | x                                  |    | x  |    | xx |    | x  | x  |                            |  |  |  |          |
| 24       | 24       | 144      | 5                 | ✓ 5.0              | x                                  |    | x  |    | x  | xx | x  | x  |                            |  |  |  |          |

Version: 13NOV2020

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

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

Bottom Depth: 2537 m  
Transmisso Cleaned: Y / N

Time UTC Local  
Start 07:42 07:42  
Bottom 08:20 08:20  
End 09:21 09:21

Positional Information  
Start Lat: 48 ° 48.920 N  
Lon: 128 ° 39.850 W

Bottom Lat: 48 ° 48.820 N  
Lon: 128 ° 39.730 W

End Lat: 48 ° 48.600 N  
Lon: 128 ° 39.470 W

Extra comments:

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P9

Event #: 46

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 04 | 02 | 2021

| Niskin # | Firing # | Sample #           | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  | Comments |
|----------|----------|--------------------|-------------------|--------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|----------|
|          |          |                    | Target Pressure   | Confirmed Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |          |
| 1        |          | 45 <del>5046</del> | 5                 | ✓ 5                | x                                  | x     | xx  | xx   |                           |  |  |  |          |
| 2        |          | 46 <del>5046</del> | LOOP              | CW                 | x                                  |       | xx  |      |                           |  |  |  |          |
| 3        |          | 5046               |                   |                    |                                    |       |     |      |                           |  |  |  |          |
| 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): MG

Bottom Depth: 2408 m  
Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1214 | 0414  |
| Bottom | 1246 |       |
| End    | 1317 |       |

Positional Information

|        |                    |
|--------|--------------------|
| Start  | Lat: 48 ° 51.34 N  |
|        | Lon: 129 ° 09.91 W |
| Bottom | Lat: 48 ° 51.24 N  |
|        | Lon: 129 ° 09.99 W |
| End    | Lat: 48 ° 51.18 N  |
|        | Lon: 129 ° 10.05 W |

Extra comments:  
  
Plus loops, 1xSal, 2xChl

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      | Sample Lists: Core_Samples |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|----------------------------|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC |                            |  |          |
| 1        |          | 146      | 5                 | ✓ 5                  | x                                  | x   | xx   |                            |  |          |
| 2        |          |          |                   |                      |                                    |     |      |                            |  |          |
| 3        |          |          |                   |                      |                                    |     |      |                            |  |          |
| 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): MG

Bottom Depth: 2670 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1608 | 0808  |
| Bottom | 1642 |       |
| End    | 1714 |       |

Positional Information

Start

Lat: 48 ° 53.60 N

Lon: 129 ° 39.88 W

Bottom

Lat: 48 ° 53.56 N

Lon: 129 ° 39.78 W

End

Lat: 48 ° 53.51 N

Lon: 129 ° 39.84 W

Extra comments:

Water Properties Group

Program STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P11

Event #: 48

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 4 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|----------------------------|--|--|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Nut-F                              | CHL | HPLC |                            |  |  |  |  |  |  |  |  |  |          |
| 1        | 1        | 147      | 5                 | ✓ 5                | x                                  | x   | xx   |                            |  |  |  |  |  |  |  |  |  |          |
| 2        |          |          |                   |                    |                                    |     |      |                            |  |  |  |  |  |  |  |  |  |          |
| 3        |          |          |                   |                    |                                    |     |      |                            |  |  |  |  |  |  |  |  |  |          |
| 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): MR

Bottom Depth: 2770 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 20 03 | 12 03 |
| Bottom | 20 38 |       |
| End    | 21 11 |       |

| Positional Information |      |               |  |
|------------------------|------|---------------|--|
| Start                  | Lat: | 48 ° 56 230 N |  |
|                        | Lon: | 130 ° 9 760 W |  |
| Bottom                 | Lat: | 48 ° 56 220 N |  |
|                        | Lon: | 130 ° 9 790 W |  |
| End                    | Lat: | 48 ° 56 190 N |  |
|                        | Lon: | 130 ° 9 700 W |  |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |        |        |       |     |      | Sample Lists: Custom Samples |  |  |  |  |  | Comments |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|--------|--------|-------|-----|------|------------------------------|--|--|--|--|--|----------|--|
|          |          |          | Target Pressure   | Confirmed Pressure | DMS                                | DMSP-d | DMSP-t | Nut-F | CHL | HPLC |                              |  |  |  |  |  |          |  |
|          |          |          |                   | ✓                  |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 1        | 1        | 148      | 400               | ✓                  | 400                                | x      | x      | x     | x   |      |                              |  |  |  |  |  |          |  |
| 2        | 2        | 149      | 200               | ✓                  | 200                                | x      | x      | x     | x   |      |                              |  |  |  |  |  |          |  |
| 3        | 3        | 150      | 150               | ✓                  | 150                                | x      | x      | x     | x   |      |                              |  |  |  |  |  |          |  |
| 4        | 4        | 151      | 100               | ✓                  | 100                                | x      |        |       | x   | x    |                              |  |  |  |  |  |          |  |
| 5        | 5        | 152      | 75                | ✓                  | 75                                 | x      |        |       | x   | x    |                              |  |  |  |  |  |          |  |
| 6        | 6        | 153      | 60                | ✓                  | 60                                 |        |        |       | xx  | x    | xx                           |  |  |  |  |  |          |  |
| 7        | 7        | 154      | 50                | ✓                  | 50                                 | x      |        |       | x   | x    | xx                           |  |  |  |  |  |          |  |
| 8        | 8        | 155      | 40                | ✓                  | 40                                 | x      |        |       | x   | x    | xx                           |  |  |  |  |  |          |  |
| 9        | 9        | 156      | 30                | ✓                  | 30                                 | x      | x      | x     | x   | x    | xx                           |  |  |  |  |  |          |  |
| 10       | 10       | 157      | 25                | ✓                  | 25                                 | x      |        |       | x   | x    |                              |  |  |  |  |  |          |  |
| 11       | 11       | 158      | 20                | ✓                  | 20                                 | xx     | xx     | xx    | x   | xx   |                              |  |  |  |  |  |          |  |
| 12       | 12       | 159      | 15                | ✓                  | 15                                 | x      |        |       | x   | xx   |                              |  |  |  |  |  |          |  |
| 13       | 13       | 160      | 10                | ✓                  | 10                                 | x      |        |       | x   | xx   |                              |  |  |  |  |  |          |  |
| 14       | 14       | 161      | 5                 | ✓                  | 5                                  | x      | x      | x     | x   |      |                              |  |  |  |  |  |          |  |
| 15       | 15       | 162      | 5                 | ✓                  | 5                                  |        |        |       | x   | x    | xx                           |  |  |  |  |  |          |  |
| 16       | 16       | 163      | 0                 | ✓                  | 2.4                                | x      | x      | x     | x   | x    |                              |  |  |  |  |  |          |  |
| 17       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 18       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 19       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 20       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 21       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 22       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 23       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |
| 24       |          |          |                   |                    |                                    |        |        |       |     |      |                              |  |  |  |  |  |          |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MB

Bottom Depth: 3252 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 0005 1605

Bottom 0012

End 0031

Positional Information

Start Lat: 48 ° 58 730 N  
Lon: 130 ° 39 720 W

Bottom Lat: 48 ° 58 220 N  
Lon: 130 ° 39 600 W

End Lat: 48 ° 58 150 N  
Lon: 130 ° 39 610 W

Extra comments:

DMS

Water Properties Group

Program  
STN List: Line\_P

Sampling Log

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

Cruise ID: 2021-001 Station: P12 Event #: 51 Ship: JP Tully UTC Date (dd|mmm|yyyy): 05 | FEB | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |       |       | Sample Lists: Core_Samples |     |      |  |  |  | Comments |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-------|-------|----------------------------|-----|------|--|--|--|----------|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | SAL | Nut-F | Nut-C | DIC                        | DOC | CDOM |  |  |  |          |  |  |
| 1        | 1        | 164      | Bot-10            | ✓ 3229               | xx                                 |     | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 2        | 2        | 165      | 3000              | ✓ 2998               | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 3        | 3        | 166      | 3000              | ✓ 2998               | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 4        | 4        | 167      | 2500              | ✓ 2500               | x                                  | xx  | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 5        | 5        | 168      | 2000              | ✓ 2000               | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 6        | 6        | 169      | 1500              | ✓ 1501               | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 7        | 7        | 170      | 1250              | ✓ 1250               | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 8        | 8        | 171      | 1000              | ✓ 999                | x                                  | x   | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 9        | 9        | 172      | 800               | ✓ 800                | x                                  |     | xx    | xx    | x                          | x   | x    |  |  |  |          |  |  |
| 10       | 10       | 173      | 600               | ✓ 600                | xx                                 |     | x     | x     | x                          | x   | x    |  |  |  |          |  |  |
| 11       | 11       | 174      | 400               | ✓ 400                | x                                  |     | x     | x     | xx                         | x   | x    |  |  |  |          |  |  |
| 12       | 12       | 175      | 300               | ✓ 299                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 13       | 13       | 176      | 250               | ✓ 250                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 14       | 14       | 177      | 200               | ✓ 200                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 15       | 15       | 178      | 175               | ✓ 175                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 16       | 16       | 179      | 150               | ✓ 149                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 17       | 17       | 180      | 125               | ✓ 126                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 18       | 18       | 181      | 100               | ✓ 102                | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 19       | 19       | 182      | 75                | ✓ 76                 | x                                  |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 20       | 20       | 183      | 50                | ✓ 50                 | x                                  |     | x     |       | x                          | xx  | x    |  |  |  |          |  |  |
| 21       | 21       | 184      | 25                | ✓ 25                 | x                                  |     | xx    |       | x                          | x   | x    |  |  |  |          |  |  |
| 22       | 22       | 185      | 10                | ✓ 10                 | x                                  |     | x     |       | x                          | x   | xx   |  |  |  |          |  |  |
| 23       | 23       | 186      | 5                 | ✓ 4.2                | xx                                 |     | x     |       | x                          | x   | x    |  |  |  |          |  |  |
| 24       | 24       |          |                   |                      |                                    |     |       |       |                            |     |      |  |  |  |          |  |  |

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

Bottom Depth: 3230 m  
Transmisso Cleaned: (Y) I N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0144 | 1744  |
| Bottom | 0240 |       |
| End    | 0359 |       |

Positional Information  
Start  
Lat: 48° 58' 22" N  
Lon: 130° 40.02' W

Bottom  
Lat: 48° 58.160' N  
Lon: 130° 40.110' W

End  
Lat: 48° 58.220' N  
Lon: 130° 40.270' W

Extra comments:  
Deep

**Program**  
**STN List:** All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:            P12

Event #: 52

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 5 FEB 2021

[illegible]

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

Bottom Depth: 3233 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 0505       |              |
| <b>Bottom</b> | 0545       |              |
| <b>End</b>    | 0621       |              |

**Positional Information**

|      |              |   |
|------|--------------|---|
| Lat: | 48° 58' 18"  | N |
| Lon: | 130° 46' 15" | W |

|      |       |        |   |
|------|-------|--------|---|
| Lat: | 48 °  | 58 154 | N |
| Lon: | 130 ° | 40 366 | W |

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 58 127  | N |
| Lon: | 130 ° 40 314 | W |

**Extra comments:**  
**TM-800**

Program  
STN List: All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:            P12

Event #: 53

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 05 02 21

[illegible]

**Profile type:**  
ROS TRM X-Niskin other?

**Watchkeeper(s):** 1<5

Bottom Depth: 3252 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 0714       |              |
| <b>Bottom</b> | 0727       |              |
| <b>End</b>    | 0745       |              |

### Positional Information

|      |     |   |        |   |
|------|-----|---|--------|---|
| Lat: | 48  | ° | 58.202 | N |
| Lon: | 130 | ° | 40.005 | W |

|      |     |   |        |   |
|------|-----|---|--------|---|
| Lat: | 48  | ° | 58.214 | N |
| Lon: | 130 | ° | 40.001 | W |

|      |     |   |        |   |
|------|-----|---|--------|---|
| Lat: | 48  | ° | 58.219 | N |
| Lon: | 130 | ° | 40.010 | W |

**Extra comments:**

TM-75

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |  |  |  |  |          |
| 1        |          | 197      | 5                 | ✓ 5.3                | x                                  | x     | xx  | xx   |                           |  |  |  |  |  |  |  |          |
| 2        |          | 5055     | LOOP              |                      | x                                  |       | xx  |      |                           |  |  |  |  |  |  |  |          |
| 3        |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |
| 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): MG/MR

Bottom Depth: 3237 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1415 | 0615  |
| Bottom | 1449 |       |
| End    | 1520 |       |

Positional Information

Start

Lat: 49 ° 02.58 N  
Lon: 131 ° 40.00 W

Bottom

Lat: 49 ° 02.59 N  
Lon: 131 ° 39.98 W

End

Lat: 49 ° 02.55 N  
Lon: 131 ° 40.14 W

Extra comments:

Plus loops 1 SAL 2 CHL

Water Properties Group

Program  
STN List: Line\_P

Sampling Log

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

Cruise ID: 2021-001

Station: P14

Event #: 57

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 5 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core Samples |     |      |  |  | Comments      |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----------------------------|-----|------|--|--|---------------|
|          |          |          | Target Pressure   | Confirmed Pressure |                                    | Nut-F | SAL | CHL | HPLC |                            | DOC | CDOM |  |  |               |
| 1        | 1        | 198      | Bot-10            | ✓ 3360             |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 2        | 2        | 199      | 3000              | ✓ 3000             |                                    |       | x   |     |      |                            | x   | x    |  |  |               |
| 3        | 3        | 200      | 2500              | ✓ 2500             |                                    |       | xx  |     |      |                            | x   | x    |  |  |               |
| 4        | 4        | 201      | 2250              | ✓ 2250             |                                    |       | x   |     |      |                            | x   | x    |  |  |               |
| 5        | 5        | 202      | 2000              | ✓ 2000             |                                    |       | x   |     |      |                            | x   | x    |  |  |               |
| 6        | 6        | 203      | 1750              | ✓ 1750             |                                    |       | x   |     |      |                            | x   | x    |  |  |               |
| 7        | 7        | 204      | 1500              | ✓ 1500             |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 8        | 8        | 205      | 1250              | ✓ 1250             |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 9        | 9        | 206      | 1000              | ✓ 1000             |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 10       | 10       | 207      | 800               | ✓ 800              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 11       | 11       | 208      | 600               | ✓ 600              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 12       | 12       | 209      | 400               | ✓ 400              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 13       | 13       | 210      | 300               | ✓ 300              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 14       | 14       | 211      | 250               | ✓ 250              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 15       | 15       | 212      | 200               | ✓ 200              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 16       | 16       | 213      | 175               | ✓ 175              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 17       | 17       | 214      | 150               | ✓ 150              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 18       | 18       | 215      | 125               | ✓ 125              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 19       | 19       | 216      | 100               | ✓ 100              |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 20       | 20       | 217      | 75                | ✓ 75               |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 21       | 21       | 218      | 50                | ✓ 50               |                                    |       |     |     |      |                            | x   | x    |  |  |               |
| 22       | 22       | 219      | 25                | ✓ 25               |                                    |       |     |     |      |                            | x   | xx   |  |  |               |
| 23       | 23       | 220      | 10                | ✓ 10               |                                    |       |     |     |      |                            | xx  | x    |  |  | leaking vent. |
| 24       | 24       | 221      | 5                 | ✓ 5                |                                    | x     |     | x   | xx   |                            | x   | x    |  |  |               |

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

Bottom Depth: 3366 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1009 | 1209  |
| Bottom | 2103 |       |
| End    | 2220 |       |

Positional Information

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 7 440   | N |
| Lon: | 132 ° 39 960 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 7 385   | N |
| Lon: | 132 ° 39 936 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 7 405   | N |
| Lon: | 132 ° 39 976 | W |

Extra comments:

Cruise ID: 2021-001

Station: P15

Event #: 58

Ship: JP Tully

UTC Date (dd mmm yyyy): 6 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |  |  |  |  |          |
| 1        | 1        | 222      | 5                 | ✓ 5                  | x                                  | x     | xx  | xx   |                           |  |  |  |  |  |  |  | FL: 42   |
| 2        |          | 5058     | LOOP              |                      | x                                  |       | xx  |      |                           |  |  |  |  |  |  |  |          |
| 3        |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |
| 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: 3411 m

Transmisso Cleaned: Y Y N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0314 | 1914  |
| Bottom | 0347 |       |
| End    | 0418 |       |

Positional Information

Start

Lat: 49 ° 12 000 N

Lon: 133 ° 40 090 W

Bottom

Lat: 49 ° 11 970 N

Lon: 133 ° 40 300 W

End

Lat: 49 ° 11 890 N

Lon: 133 ° 40 450 W

Extra comments:

Plus loops

**Program**  
**STN List:** All\_Stns

## Sampling Log

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

Cruise ID:

2021-001

**Station:**

P16

Event #:

60

Ship: JP Tully

UTC Date (dd mmm/yyyy): 06 02 2021

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 3765 m

Transmisso Cleaned: ~~Y / N~~

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 0949  | 0249  |
| Bottom | 10:21 | 03:21 |
| End    | 10:51 | 03    |

| Positional Information |     |          |   |
|------------------------|-----|----------|---|
| Lat:                   | 49  | ° 17.082 | N |
| Lon:                   | 134 | ° 39.859 | W |

Bottom

|      |     |      |     |   |
|------|-----|------|-----|---|
| Lat: | 49  | ° 17 | 055 | N |
| Lon: | 134 | ° 39 | 688 | W |

|     |                     |
|-----|---------------------|
| End | Lat: 49 ° 10 969 N  |
|     | Lon: 134 ° 39 724 W |

**Extra comments:**  
**TM-800**

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P16

Event #: 61

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 06 | 02 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |            | Sampler's Initials / Samples Taken |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  |  |  | Comments |  |
|----------|----------|----------|-------------------|------------|------------------------------------|-----|------|---------------------------|--|--|--|--|--|--|--|--|--|----------|--|
|          |          |          | Target Pressure   | Confirmed  | Nut-F                              | CHL | HPLC |                           |  |  |  |  |  |  |  |  |  |          |  |
|          |          |          |                   | ✓ Pressure |                                    |     |      |                           |  |  |  |  |  |  |  |  |  |          |  |
| 1        |          | 229      | 75                | ✓          | 74                                 | X   | X    |                           |  |  |  |  |  |  |  |  |  |          |  |
| 2        |          | 230      | 60                | ✓          | 61                                 | XX  | XX   | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 3        |          | 231      | 50                | ✓          | 50                                 | X   | X    | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 4        |          | 232      | 40                | ✓          | 40                                 | X   | X    | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 5        |          | 233      | 30                | ✓          | 31                                 | X   | X    | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 6        |          | 234      | 15                | ✓          | 15                                 | X   | XX   | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 7        |          | 235      | 5                 | ✓          | 5                                  | X   | X    | XX                        |  |  |  |  |  |  |  |  |  |          |  |
| 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): MG

Bottom Depth: 3624 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1110 | 0310  |
| Bottom | 1113 |       |
| End    | 1123 |       |

Positional Information

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 17.01 | N |
| Lon: | 134 ° | 39.64 | W |

Bottom

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 16.99 | N |
| Lon: | 134 ° | 39.60 | W |

End

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 16.93 | N |
| Lon: | 134 ° | 39.59 | W |

Extra comments:  
HPLC  
CTD to 150

**Water Properties Group**

Cruise ID: 2021-001

Program STN List: All\_Stns

Station: P16

**Sampling Log**

Event #: 62

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

Ship: JP Tully

UTC Date (dd:mmm/yyyy): 06 02 2021

| Comments | Profile type: |
|----------|---------------|
|          |               |

2021-001

**Station:**

**P16**

**Event #:**

62

**Ship:**

JP Tully

UTC Date (dd mmm yyyy): 06 02 2021

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 37106 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 1326       | 0526         |
| <b>Bottom</b> | 1338       | 0538         |
| <b>End</b>    | 1349       | 0549         |

**Start**

| Positional Information |                |
|------------------------|----------------|
| Lat:                   | 49 ° 16 962 N  |
| Lon:                   | 134 ° 39 764 W |

|        |      |     |   |    |     |   |
|--------|------|-----|---|----|-----|---|
| Bottom | Lat: | 49  | ° | 16 | 921 | N |
|        | Lon: | 134 | ° | 39 | 845 | W |

End

|      |     |   |    |     |   |
|------|-----|---|----|-----|---|
| Lat: | 49  | ° | 16 | 904 | N |
| Lon: | 134 | ° | 39 | 884 | W |

Extra comments:  
TM-75

# Water Properties Group

Program  
STN List:

Line\_P

## Sampling Log

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

Cruise ID: 2021-001

Station: P16

Event #: 63

Ship: JP Tully

UTC Date (dd:mmm/yyyy): 06 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |        |          |          | Sample Lists: Core_Samples |    |    |  | Comments |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|--------|----------|----------|----------------------------|----|----|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | MR OXY                             | MR SAL | MR Nut-F | MR Nut-C | CW                         | CW |    |  |          |  |  |  |
| 1        |          | 240      | Bot-10            | ✓ 3686               | x                                  |        | x        | x        |                            | x  | x  |  |          |  |  |  |
| 2        |          | 241      | 3500              | ✓ 3499               | x                                  | x      | x        | x        |                            | x  | x  |  |          |  |  |  |
| 3        |          | 242      | 3500              | ✓ 3499               | x                                  | x      | x        | x        |                            | x  | x  |  |          |  |  |  |
| 4        |          | 243      | 3000              | ✓ 3000               | xx                                 | xx     | x        | x        |                            | x  | x  |  |          |  |  |  |
| 5        |          | 244      | 2500              | ✓ 2500               | x                                  | x      | x        | x        |                            | x  | x  |  |          |  |  |  |
| 6        |          | 245      | 2000              | ✓ 2001               | x                                  | x      | x        | x        |                            | x  | x  |  |          |  |  |  |
| 7        |          | 246      | 1500              | ✓ 1500               | x                                  | x      | x        | x        |                            | x  | x  |  |          |  |  |  |
| 8        |          | 247      | 1250              | ✓ 1250               | xx                                 |        | xx       | xx       |                            | x  | x  |  |          |  |  |  |
| 9        |          | 248      | 1000              | ✓ 1001               | x                                  |        | x        | x        |                            | x  | x  |  |          |  |  |  |
| 10       |          | 249      | 800               | ✓ 800                | x                                  |        | x        | x        |                            | x  | x  |  |          |  |  |  |
| 11       |          | 250      | 600               | ✓ 601                | x                                  |        | x        | x        |                            | x  | x  |  |          |  |  |  |
| 12       |          | 251      | 400               | ✓ 400                | x                                  |        | x        | x        |                            | x  | x  |  |          |  |  |  |
| 13       |          | 252      | 300               | ✓ 300                | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 14       |          | 253      | 250               | ✓ 250                | x                                  |        | xx       |          |                            | x  | x  |  |          |  |  |  |
| 15       |          | 254      | 200               | ✓ 200                | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 16       |          | 255      | 175               | ✓ 175                | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 17       |          | 256      | 150               | ✓ 150                | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 18       |          | 257      | 125               | ✓ 125                | xx                                 |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 19       |          | 258      | 100               | ✓ 102                | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 20       |          | 259      | 75                | ✓ 75                 | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 21       |          | 260      | 50                | ✓ 52                 | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 22       |          | 261      | 25                | ✓ 25                 | x                                  |        | x        |          |                            | xx | x  |  |          |  |  |  |
| 23       |          | 262      | 10                | ✓ 10                 | x                                  |        | x        |          |                            | x  | x  |  |          |  |  |  |
| 24       |          | 263      | 5                 | ✓ 5.7                | x                                  |        | x        |          |                            | x  | xx |  |          |  |  |  |

Version: 28May2020

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

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

Bottom Depth: 3633 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1606 | 0806  |
| Bottom | 1704 |       |
| End    | 1821 |       |

Positional Information

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 16.93 | N |
| Lon: | 134 ° | 39.96 | W |

Bottom

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 16.90 | N |
| Lon: | 134 ° | 40.10 | W |

End

|      |       |       |   |
|------|-------|-------|---|
| Lat: | 49 °  | 16.84 | N |
| Lon: | 134 ° | 40.30 | W |

Extra comments:  
Deep

Cruise ID: 2021-001

Station: P17

Event #: 160

Ship: JP Tully

UTC Date (dd mmm yyyy): 16 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |           |          | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |         |
|----------|----------|----------|-------------------|-----------|----------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--|--|--|--|----------|---------|
|          |          |          | Target Pressure   | Confirmed | Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |  |  |  |  |          |         |
|          |          |          | ✓                 |           |          |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |         |
| 1        |          | 264      | 5                 | ✓         | 5.6      | x                                  | x     | xx  | xx   |                           |  |  |  |  |  |  |  |          | FL: < 2 |
| 2        |          | 5066     | LOOP              |           |          | x                                  |       | xx  |      |                           |  |  |  |  |  |  |  |          |         |
| 3        |          |          |                   |           |          |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |         |
| 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: ~3500 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0027 | 1627  |
| Bottom | 0059 |       |
| End    | 0132 |       |

Positional Information

Start

Lat: 49 ° 20 996 N

Lon: 135 ° 39 908 W

Bottom

Lat: 49 ° 20 964 N

Lon: 135 ° 39 901 W

End

Lat: ° N

Lon: ° W

Extra comments:

Plus loops, 1x Sal, 2x Chl

Cruise ID: 2021-001

Station: P18

Event #: 67

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 7 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |           | Sampler's Initials / Samples Taken |     |     |      |     |      | Sample Lists: All_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|-----------|------------------------------------|-----|-----|------|-----|------|---------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed | ← MG/RF → CW CW                    |     |     |      |     |      |                           |  |  |  |  |  |          |
|          |          |          | ✓                 | Pressure  | Nut-F                              | SAL | CHL | HPLC | DOC | CDOM |                           |  |  |  |  |  |          |
| 1        | 1        | 265      | Bot-10            | ✓         | 3884.9                             |     |     |      |     | x    | x                         |  |  |  |  |  |          |
| 2        | 2        | 266      | 3500              | ✓         | 3499.0                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 3        | 3        | 267      | 3000              | ✓         | 3000.5                             |     | xx  |      |     | x    | x                         |  |  |  |  |  |          |
| 4        | 4        | 268      | 2500              | ✓         | 2500.8                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 5        | 5        | 269      | 2000              | ✓         | 1999.7                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 6        | 6        | 270      | 1750              | ✓         | 1750.4                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 7        | 7        | 271      | 1500              | ✓         | 1499.5                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 8        | 8        | 272      | 1250              | ✓         | 1249.3                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 9        | 9        | 273      | 1000              | ✓         | 1000.3                             |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 10       | 10       | 274      | 800               | ✓         | 799.4                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 11       | 11       | 275      | 600               | ✓         | 600.9                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 12       | 12       | 276      | 400               | ✓         | 399.9                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 13       | 13       | 277      | 300               | ✓         | 299.5                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 14       | 14       | 278      | 250               | ✓         | 251.0                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 15       | 15       | 279      | 200               | ✓         | 200.4                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 16       | 16       | 280      | 175               | ✓         | 175.3                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 17       | 17       | 281      | 150               | ✓         | 150.6                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 18       | 18       | 282      | 125               | ✓         | 124.9                              |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 19       | 19       | 283      | 100               | ✓         | 99.9                               |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 20       | 20       | 284      | 75                | ✓         | 74.5                               |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 21       | 21       | 285      | 50                | ✓         | 50.6                               |     | x   |      |     | x    | xx                        |  |  |  |  |  |          |
| 22       | 22       | 286      | 25                | ✓         | 25.7                               |     | x   |      |     | x    | x                         |  |  |  |  |  |          |
| 23       | 23       | 287      | 10                | ✓         | 10.4                               |     | x   |      |     | xx   | x                         |  |  |  |  |  |          |
| 24       | 24       | 288      | 5                 | ✓         | 5.3                                | x   | x   | x    | xx  | x    | x                         |  |  |  |  |  |          |

Version: 13NOV2020

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

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): RF

Bottom Depth: 3900 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0634 | 2234  |
| Bottom | 0739 | 2339  |
| End    | 0857 | 0057  |

Positional Information

Start

Lat: 49 ° 26.010 N

Lon: 136 ° 40.110 W

Bottom

Lat: 49 ° 26.040 N

Lon: 136 ° 40.650 W

End

Lat: 49 ° 26.220 N

Lon: 136 ° 40.690 W

Extra comments:

Cruise ID: 2021-001

Station: P19

Event #: 69

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 07 | 02 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |           |          | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |  |
|----------|----------|----------|-------------------|-----------|----------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--|--|--|--|----------|--|
|          |          |          | Target Pressure   | Confirmed |          |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |  |
|          |          |          | Pressure          | √         | Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |  |  |  |  |          |  |
| 1        |          | 289      | 5                 |           |          | x                                  | x     | xx  | xx   |                           |  |  |  |  |  |  |  |          |  |
| 2        |          | 5069     | LOOP              |           |          | x                                  |       | xx  |      |                           |  |  |  |  |  |  |  |          |  |
| 3        |          |          |                   |           |          |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |  |
| 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): MG

Bottom Depth: 3916 m

Transmisso Cleaned: Y N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1325 | 0525  |
| Bottom | 1359 |       |
| End    | 1429 |       |

Positional Information

Lat: 49 ° 30.14 N

Lon: 137 ° 39.78 W

Lat: 49 ° 30.09 N

Lon: 137 ° 39.96 W

Lat: 49 ° 30.00 N

Lon: 137 ° 39.98 W

Extra comments:

Plus loops, 1xSal, 2xChl

**Program**  
**STN List:** All\_Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:           P20          

Event #: 70

Ship: JP Tully

UTC Date (dd mmm yyyy): 07 02 2021

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): 159

Bottom Depth: 3955 m

Transmisso Cleaned: ~~Y / N~~

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1847 | 1047  |
| Bottom | 1915 | 1115  |
| End    | 1948 | 1145  |

**Positional Information**

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 33.954 | N |
| Lon: | 138 ° 39.91 | W |

|      |                |   |
|------|----------------|---|
| Lat: | 49 ° 33' 9.67  | N |
| Lon: | 138 ° 40' .005 | W |

|      |                   |   |
|------|-------------------|---|
| Erid | Lat: 49 ° 34 237  | N |
|      | Lon: 138 ° 40 050 | W |

**Extra comments:**  
TM-800

Cruise ID: 2021-001

Station: P20

Event #: 72

Ship: JP Tully

UTC Date (dd mmm yyyy): 7 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|---------------------------|--|--|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC |                           |  |  |  |  |  |  |  |  |  |          |
| 1        | 1 296    | X        | 75                | ✓ 75                 | x                                  | x   |      |                           |  |  |  |  |  |  |  |  |  |          |
| 2        | 2 297    | #VALUE!  | 60                | ✓ 60                 | xx                                 | x   | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 3        | 3 298    | #VALUE!  | 50                | ✓ 50                 | x                                  | xx  | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 4        | 4 299    | #VALUE!  | 40                | ✓ 41.5               | xx                                 | x   | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 5        | 5 300    | #VALUE!  | 30                | ✓ 30                 | x                                  | x   | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 6        | 6 301    | #VALUE!  | 15                | ✓ 15                 | x                                  | x   | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 7        | 7 302    | #VALUE!  | 5                 | ✓ 5.5                | x                                  | xx  | xx   |                           |  |  |  |  |  |  |  |  |  |          |
| 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: ~4025 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2016 | 1216  |
| Bottom | 2018 |       |
| End    | 2028 |       |

Positional Information

Start

Lat: 49 ° 34 030 N  
Lon: 138 ° 40 020 W

Bottom

Lat: 49 ° 34 040 N  
Lon: 138 ° 40 030 W

End

Lat: 49 ° 34 020 N  
Lon: 138 ° 40 010 W

Extra comments:

HPLC

CTD to 150

**Program**  
**STN List:** All Stns

## Sampling Log

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

Cruise ID: 2021-001

Station:           P20          

Event #: 73

Ship: JP Tully

UTC Date (dd mmm yyyy): 07 02 21

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 3934 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 2030       | 1200         |
| <b>Bottom</b> | 2046       |              |
| <b>End</b>    | 2058       |              |

### Positional Information

|      |                |
|------|----------------|
| Lat: | 49 ° 34 014 N  |
| Lon: | 138 ° 40 012 W |

|      |     |   |    |   |     |   |
|------|-----|---|----|---|-----|---|
| Lat: | 49  | ° | 34 | ' | 013 | N |
| Lon: | 138 | ° | 40 | ' | 048 | W |

|      |     |   |    |     |   |
|------|-----|---|----|-----|---|
| Lat: | 49  | ° | 34 | 009 | N |
| Lon: | 138 | ° | 40 | 048 | W |

**Extra comments:**

TM-75

Cruise ID: 2021-001

Station: P20

Event #: 75

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 7 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |       |       |     |     | Sample Lists: Core_Samples |  |  |  |  |  | Comments        |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-------|-------|-----|-----|----------------------------|--|--|--|--|--|-----------------|
|          |          |          | Target Pressure   | Confirmed Pressure | m/m                                | R   | R     | R     | MA  | GL  |                            |  |  |  |  |  |                 |
|          |          |          |                   | ✓                  | OXY                                | SAL | Nut-F | Nut-C | DIC | DOC | CDOM                       |  |  |  |  |  |                 |
| 1        | 1        | 307      | Bot-10            | ✓ 4022             | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 2        | 2        | 308      | 3500              | ✓ 3500             | x                                  | x   | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 3        | 3        | 309      | 3500              | ✓ 3500             | x                                  | x   | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 4        | 4        | 310      | 3000              | ✓ 3000             | x                                  | x   | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 5        | 5        | 311      | 2500              | ✓ 2500             | x                                  | x   | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 6        | 6        | 312      | 2000              | ✓ 2000             | x                                  | xx  | xx    | xx    | x   | x   | x                          |  |  |  |  |  |                 |
| 7        | 7        | 313      | 1500              | ✓ 1500             | xx                                 | x   | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 8        | 8        | 314      | 1250              | ✓ 1250             | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 9        | 9        | 315      | 1000              | ✓ 1000             | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 10       | 10       | 316      | 800               | ✓ 800              | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 11       | 11       | 317      | 600               | ✓ 600              | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 12       | 12       | 318      | 400               | ✓ 400              | x                                  |     | x     | x     | x   | x   | x                          |  |  |  |  |  |                 |
| 13       | 13       | 319      | 300               | ✓ 301              | xx                                 |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 14       | 14       | 320      | 250               | ✓ 250              | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 15       | 15       | 321      | 200               | ✓ 201              | x                                  |     | x     |       | xx  | x   | x                          |  |  |  |  |  |                 |
| 16       | 16       | 322      | 175               | ✓ 175              | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 17       | 17       | 323      | 150               | ✓ 150              | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 18       | 18       | 324      | 125               | ✓ 125              | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 19       | 19       | 325      | 100               | ✓ 100              | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 20       | 20       | 326      | 75                | ✓ 75               | xx                                 |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 21       | 21       | 327      | 50                | ✓ 50               | x                                  |     | x     |       | x   | x   | xx                         |  |  |  |  |  |                 |
| 22       | 22       | 328      | 25                | ✓ 25               | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |
| 23       | 23       | 329      | 10                | ✓ 10               | x                                  |     | xx    |       | x   | xx  | x                          |  |  |  |  |  | DIDN'T WAIT 30S |
| 24       | 24       | 330      | 5                 | ✓ 5                | x                                  |     | x     |       | x   | x   | x                          |  |  |  |  |  |                 |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MB

Bottom Depth: 4008 m

Transmisso Cleaned: YY N

Time UTC Local

Start 2258 1458

Bottom 0605

End 0129

Positional Information

Start Lat: 49 ° 34 010 N  
Lon: 138 ° 39 990 W

Bottom Lat: 49 ° 34 120 N  
Lon: 138 ° 40 410 W

End Lat: 49 ° 34 120 N  
Lon: 138 ° 40 270 W

Extra comments:

Deep

Cruise ID: 2021-001

Station: P21

Event #: 77

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 8 | FEB | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |  |  |  |  |          |
| 1        | 1        | 331      | 5                 | ✓ 5                                                    | x                                  | x     | xx  | xx   |                           |  |  |  |  |  |  |  |          |
| 2        |          | 5077     | LOOP              |                                                        | x                                  |       | xx  |      |                           |  |  |  |  |  |  |  |          |
| 3        |          |          |                   |                                                        |                                    |       |     |      |                           |  |  |  |  |  |  |  |          |
| 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: 3948 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0514 | 2114  |
| Bottom | 0550 |       |
| End    | 0623 |       |

Positional Information

Start

Lat: 49 ° 37 987 N

Lon: 139 ° 39 983 W

Bottom

Lat: 49 ° 38 020 N

Lon: 139 ° 40 000 W

End

Lat: 49 ° 37 998 N

Lon: 139 ° 39 997 W

Extra comments:

Plus loops: 1xSal, 2xChl

## Water Properties Group

Program  
STN List:

All Stns

## Sampling Log

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

Cruise ID:

2021-001

Station:

P22

Event #:

78

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 8 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |     |      |     |      | Sample Lists: All_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|-----|------|-----|------|---------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Nut-F                              | SAL | CHL | HPLC | DOC | CDOM |                           |  |  |  |  |  |          |
| 1        | 1        | 332      | Bot-10            | ✓                  | 3971.7                             |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 2        | 2        | 333      | 3500              | ✓                  | 3501.3                             |     | x   |      | x   | x    |                           |  |  |  |  |  |          |
| 3        | 3        | 334      | 3000              | ✓                  | 3000.6                             |     | x   |      | x   | x    |                           |  |  |  |  |  |          |
| 4        | 4        | 335      | 2500              | ✓                  | 2500.1                             |     | x   |      | x   | x    |                           |  |  |  |  |  |          |
| 5        | 5        | 336      | 2000              | ✓                  | 2000.3                             |     | x   |      | x   | x    |                           |  |  |  |  |  |          |
| 6        | 6        | 337      | 1750              | ✓                  | 1750.7                             |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 7        | 7        | 338      | 1500              | ✓                  | 1500.0                             |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 8        | 8        | 339      | 1250              | ✓                  | 1251.6                             |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 9        | 9        | 340      | 1000              | ✓                  | 999.5                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 10       | 10       | 341      | 800               | ✓                  | 801.3                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 11       | 11       | 342      | 600               | ✓                  | 599.3                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 12       | 12       | 343      | 400               | ✓                  | 400.1                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 13       | 13       | 344      | 300               | ✓                  | 299.5                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 14       | 14       | 345      | 250               | ✓                  | 250.7                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 15       | 15       | 346      | 200               | ✓                  | 200.3                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 16       | 16       | 347      | 175               | ✓                  | 175.1                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 17       | 17       | 348      | 150               | ✓                  | 150.1                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 18       | 18       | 349      | 125               | ✓                  | 124.8                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 19       | 19       | 350      | 100               | ✓                  | 100.6                              |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 20       | 20       | 351      | 75                | ✓                  | 75.0                               |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 21       | 21       | 352      | 50                | ✓                  | 50.4                               |     |     |      | x   | xx   |                           |  |  |  |  |  |          |
| 22       | 22       | 353      | 25                | ✓                  | 24.9                               |     |     |      | xx  | x    |                           |  |  |  |  |  |          |
| 23       | 23       | 354      | 10                | ✓                  | 10.1                               |     |     |      | x   | x    |                           |  |  |  |  |  |          |
| 24       | 24       | 355      | 5                 | ✓                  | 5.3                                | x   |     | x    | xx  | x    | x                         |  |  |  |  |  |          |

Version: 13NOV2020

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

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

Bottom Depth: 3911 m  
Transmissio Cleaned: ☒ Y / ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 10:06 | 02:06 |
| Bottom | 11:11 | 03:11 |
| End    | 12:26 | 04:26 |

Positional Information  
Start  
Lat: 49 ° 41.958 N  
Lon: 140 ° 39.976 W

Bottom  
Lat: 49 ° 42.020 N  
Lon: 140 ° 39.790 W

End  
Lat: 49 ° 41.960 N  
Lon: 140 ° 39.600 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All Samples |  |  |  | Comments                 |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|--------------------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |                          |
| 1        |          | 356      | 2005              | ✓ 2003               |                                    |       |     |      |                           |  |  |  | Bulk water for Cindy     |
| 2        |          | 357      | 2005              | ✓ 2004               |                                    |       |     |      |                           |  |  |  | Bulk water for Kenny     |
| 3        |          | 358      | 2005              | ✓ 2005               |                                    |       |     |      |                           |  |  |  | Bulk water for Kenny     |
| 4        |          | 359      | 2005              | ✓ 2005               |                                    |       |     |      |                           |  |  |  | Bulk water for Kenny     |
| 5        |          | 360      | 2005              | ✓ 2004               |                                    |       |     |      |                           |  |  |  | Bulk water for Sarah-Ann |
| 6        |          | 361      | 600               | ✓ 600                |                                    |       |     |      |                           |  |  |  | Bulk water for Mark      |
| 7        |          | 362      | 5                 | ✓ 49                 |                                    |       |     |      |                           |  |  |  | Bulk water for Mark      |
| 8        |          | 363      | 5                 | ✓ 50                 |                                    |       |     |      |                           |  |  |  | Bulk water for Sarah-Ann |
| 9        |          | 364      | 5                 | ✓ 5.1                |                                    | x     | x   | xx   |                           |  |  |  |                          |
| 10       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 11       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 12       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 13       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 14       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 15       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 16       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 17       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 18       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 19       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 20       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 21       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 22       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 23       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |
| 24       |          |          |                   |                      |                                    |       |     |      |                           |  |  |  |                          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 4038 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 1610 0810

Bottom 1642

End 1715

Positional Information

StartLat: 49 ° 46.07 N  
Lon: 141 ° 40.06 W

BottomLat: 49 ° 46.11 N  
Lon: 141 ° 39.97 W

EndLat: 49 ° 46.21 N  
Lon: 141 ° 39.85 W

Extra comments:

Bulk WATER  
PAR ON

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001 Station: P24 Event #: 82 Ship: JP Tully UTC Date (dd/mmm/yyyy): 8 FEB 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |     |      |     |      | Sample Lists: All Samples |  |  |  |  |  | Comments     |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-----|------|-----|------|---------------------------|--|--|--|--|--|--------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | SAL | CHL | HPLC | DOC | CDOM |                           |  |  |  |  |  |              |
| 1        | 1        | 365      | Bot-10            | ✓ 4045               |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 2        | 2        | 366      | 3500              | ✓ 3501               |                                    | x   |     |      | x   | x    |                           |  |  |  |  |  |              |
| 3        | 3        | 367      | 3000              | ✓ 3000               |                                    | x   |     |      | x   | x    |                           |  |  |  |  |  |              |
| 4        | 4        | 368      | 2500              | ✓ 2500               |                                    | x   |     |      | x   | x    |                           |  |  |  |  |  |              |
| 5        | 5        | 369      | 2000              | ✓ 2000               |                                    | x   |     |      | x   | x    |                           |  |  |  |  |  |              |
| 6        | 6        | 370      | 1750              | ✓ 1750               |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 7        | 7        | 371      | 1500              | ✓ 1500               |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 8        | 8        | 372      | 1250              | ✓ 1250               |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 9        | 9        | 373      | 1000              | ✓ 1000               |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 10       | 10       | 374      | 800               | ✓ 800                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 11       | 11       | 375      | 600               | ✓ 600                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 12       | 12       | 376      | 400               | ✓ 400                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 13       | 13       | 377      | 300               | ✓ 300                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 14       | 14       | 378      | 250               | ✓ 250                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 15       | 15       | 379      | 200               | ✓ 200                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 16       | 16       | 380      | 175               | ✓ 175                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 17       | 17       | 381      | 150               | ✓ 150                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 18       | 18       | 382      | 125               | ✓ 125                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 19       | 19       | 383      | 100               | ✓ 100                |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 20       | 20       | 384      | 75                | ✓ 75                 |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 21       | 21       | 385      | 50                | ✓ 50                 |                                    |     |     |      | xx  | x    |                           |  |  |  |  |  |              |
| 22       | 22       | 386      | 25                | ✓ 25                 |                                    |     |     |      | x   | x    |                           |  |  |  |  |  |              |
| 23       | 23       | 387      | 10                | ✓ 10                 |                                    |     |     |      | x   | x    |                           |  |  |  |  |  | LEAKING VENT |
| 24       | 24       | 388      | 5                 | ✓ 5                  | x                                  |     | x   | xx   | x   | xx   |                           |  |  |  |  |  | FL < 2       |

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

Bottom Depth: 3975 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2039 | 1239  |
| Bottom | 2143 |       |
| End    | 2311 |       |

Positional Information  
Start  
Lat: 49 ° 50 152 N  
Lon: 142 ° 39 997 W

Bottom  
Lat: 49 ° 50 218 N  
Lon: 142 ° 40 006 W

End  
Lat: 49 ° 50 204 N  
Lon: 142 ° 39 929 W

Extra comments:  
BUCKET

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P25

Event #: 84

Ship: JP Tully

UTC Date (dd/mm/yyyy): 9 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |    |     |      |       | Sample Lists: |  | All Samples |  | Comments                  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|----|-----|------|-------|---------------|--|-------------|--|---------------------------|
|          |          |          | Target Pressure   | Confirmed Pressure | MA                                 | CC | CHL | HPLC | MAIRF |               |  |             |  |                           |
| 1        | 1        | 389      | 1000              | ✓ 1000             | xx                                 |    |     |      | xx    |               |  |             |  |                           |
| 2        | 2        | 390      | 1000              | ✓ 1000             | xx                                 |    |     |      | xx    |               |  |             |  | 30 seconds                |
| 3        | 3        | 391      | 1000              | ✓ 1000             | xx                                 |    |     |      | xx    |               |  |             |  | 60 seconds                |
| 4        | 4        | 392      | 1000              | ✓ 1000             | xx                                 |    |     |      | xx    |               |  |             |  | 90 seconds                |
| 5        | 5        | 393      | 400               | ✓ 400              | xx                                 |    |     |      | xx    |               |  |             |  | 120 seconds               |
| 6        | 6        | 394      | 400               | ✓ 400              | xx                                 |    |     |      | xx    |               |  |             |  | 30 seconds                |
| 7        | 7        | 395      | 400               | ✓ 400              | xx                                 |    |     |      | xx    |               |  |             |  | 60 seconds                |
| 8        | 8        | 396      | 400               | ✓ 400              | xx                                 |    |     |      | xx    |               |  |             |  | 90 seconds                |
| 9        | 9        | 397      | 150               | ✓ 150              | xx                                 |    |     |      | xx    |               |  |             |  | 120 seconds               |
| 10       | 10       | 398      | 150               | ✓ 150              | xx                                 |    |     |      | xx    |               |  |             |  | 30 seconds                |
| 11       | 11       | 399      | 150               | ✓ 150              | xx                                 |    |     |      | xx    |               |  |             |  | 60 seconds                |
| 12       | 12       | 400      | 150               | ✓ 150              | xx                                 |    |     |      | xx    |               |  |             |  | 90 seconds                |
| 13       | 13       | 401      | 150               | ✓ 150              | xx                                 |    |     |      | xx    |               |  |             |  | 120 seconds               |
| 14       | 14       | 402      | 125               | ✓ 125              | xx                                 |    |     |      | xx    |               |  |             |  | 150 seconds               |
| 15       | 15       | 403      | 125               | ✓ 125              | xx                                 |    |     |      | xx    |               |  |             |  | 30 seconds                |
| 16       | 16       | 404      | 125               | ✓ 125              | xx                                 |    |     |      | xx    |               |  |             |  | 60 seconds                |
| 17       | 17       | 405      | 125               | ✓ 125              | xx                                 |    |     |      | xx    |               |  |             |  | 90 seconds                |
| 18       | 18       | 406      | 125               | ✓ 125              | xx                                 |    |     |      | xx    |               |  |             |  | 120 seconds               |
| 19       | 19       | 407      | 100               | ✓ 101              | xx                                 |    |     |      | xx    |               |  |             |  | 150 seconds               |
| 20       | 20       | 408      | 100               | ✓ 101              | xx                                 |    |     |      | xx    |               |  |             |  | 30 seconds                |
| 21       | 21       | 409      | 100               | ✓ 101              | xx                                 |    |     |      | xx    |               |  |             |  | 60 seconds                |
| 22       | 22       | 410      | 100               | ✓ 101              | xx                                 |    |     |      | xx    |               |  |             |  | 90 seconds                |
| 23       | 23       | 411      | 100               | ✓ 101              | xx                                 |    |     |      | xx    |               |  |             |  | 120 seconds               |
| 24       | 24       | 412      | 5                 | ✓ 5                |                                    | x  | x   | xx   |       |               |  |             |  | 150 seconds<br>30 seconds |

Version: 13NOV2020

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

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

Bottom Depth: 4125 m  
Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0242 | 1842  |
| Bottom | 0316 |       |
| End    | 0401 |       |

Positional Information

|      |                |
|------|----------------|
| Lat: | 50 ° 0 050 N   |
| Lon: | 143 ° 36 370 W |

Bottom

|      |                |
|------|----------------|
| Lat: | 50 ° 0 210 N   |
| Lon: | 143 ° 36 310 W |

End

|      |                |
|------|----------------|
| Lat: | 50 ° 0 250 N   |
| Lon: | 143 ° 36 320 W |

Extra comments:  
  
Offshore flushing experiment

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: P35

Event #: 85

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 9 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: All Samples |  |  |  | Comments |  |  |  |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|------|---------------------------|--|--|--|----------|--|--|--|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | SAL                                | Nut-F | CHL | HPLC |                           |  |  |  |          |  |  |  |  |  |  |
| 1        | ✓        | 413      | 5                 | ✓                  | 5.1                                | x     | x   | xx   | xx                        |  |  |  |          |  |  |  |  |  |  |
| 2        |          | 5085     | LOOP              | ✓                  |                                    | x     |     | xx   |                           |  |  |  |          |  |  |  |  |  |  |
| 3        |          |          |                   |                    |                                    |       |     |      |                           |  |  |  |          |  |  |  |  |  |  |
| 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): RF

Bottom Depth: 4134 m  
Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0629 | 2229  |
| Bottom | 0705 | 2305  |
| End    | 0739 | 2339  |

Positional Information

|          |          |   |
|----------|----------|---|
| Lat: 50  | ° 0.010  | N |
| Lon: 144 | ° 18.180 | W |

▼

|          |          |   |
|----------|----------|---|
| Lat: 50  | ° 0.130  | N |
| Lon: 144 | ° 18.100 | W |

▼

|          |          |   |
|----------|----------|---|
| Lat: 50  | ° 0.160  | N |
| Lon: 144 | ° 18.080 | W |

Extra comments:

Plus loops: 1xSal, 2xChl

# Water Properties Group

Cruise ID: 2021-001

Program STN List: All\_Stns

## Sampling Log

Station: P26      Event #: 86

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

Ship: JP Tully      UTC Date (dd mmm/yyyy): 09 | 02 | 2021

Cruise ID:

2021-001

**Station:**

P26

Event #:

86

**Ship:**

JP Tully

UTC Date (dd mmm yyyy): 09 / 02 / 202

[illegible]

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): KS

Bottom Depth: 4237 m

Transmisso Cleaned: Y+M

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1008 | 0208  |
| Bottom | 1052 | 0252  |
| End    | 1137 | 0337  |

### Positional Information

Start Lat: 50 ° 00.02  
Lon: 145 ° 00.11

|        |      |     |   |        |
|--------|------|-----|---|--------|
| Bottom | Lat: | 50  | ° | 00.008 |
|        | Lon: | 145 | ° | 00.019 |

End

|      |     |   |        |
|------|-----|---|--------|
| Lat: | 50  | ° | 00,008 |
| Lon: | 144 | ° | 59.995 |

**Extra comments:**

TM-1500

**Program**  
**STN List:** All\_Stns

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

Cruise ID:

2021-001

**Station:**

P26

Event #:

88

**Ship:**

JP Tully

UTC Date (dd mmm yyyy): 09 02 2021

[illegible]

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

Bottom Depth: 4286 m

Transmisso Cleaned: Y / N

| <i><b>Time</b></i> | <i><b>UTC</b></i> | <i><b>Local</b></i> |
|--------------------|-------------------|---------------------|
| <b>Start</b>       | 1226              | 0426                |
| <b>Bottom</b>      | 1243              | 0443                |
| <b>End</b>         | 1259              | 0459                |

### Positional Information

|       |                     |
|-------|---------------------|
| Start | Lat: 49 ° 59.979 N  |
|       | Lon: 144 ° 59.924 W |

|        |                     |
|--------|---------------------|
| Bottom | Lat: 49 ° 59 985 N  |
|        | Lon: 144 ° 59 944 W |

|     |      |     |   |    |     |   |
|-----|------|-----|---|----|-----|---|
| End | Lat: | 49  | ° | 59 | 984 | N |
|     | Lon: | 144 | ° | 59 | 945 | W |

**Extra comments:**

**TM-200**

Program  
STN List: All\_Stns

## Sampling Log

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

UTC Date (dd mmm yyyy): 09 | 02 | 2021

Cruise ID:

2021-001

**Station:**

P26

Event #:

91

**Ship:**

JP Tully

UTC Date (dd mmm yyyy): 09 02 202

[illegible]

Version: 13NOV2020

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

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

Bottom Depth: 4236 m

Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 1558       | 0758         |
| <b>Bottom</b> | 1601       |              |
| <b>End</b>    | 1610       |              |

**Positional Information**

|      |     |   |       |   |
|------|-----|---|-------|---|
| Lat: | 50  | ° | 00.07 | N |
| Lon: | 145 | ° | 00.02 | W |

|        |                    |
|--------|--------------------|
| Bottom | Lat: 50 ° 00.07 N  |
|        | Lon: 145 ° 00.02 W |

|     |      |     |   |       |   |
|-----|------|-----|---|-------|---|
| End | Lat: | 56  | ° | 00.06 | N |
|     | Lon: | 145 | ° | 00.02 | W |

**Extra comments:**  
HPLC   phylos  
taken on  
the deep  
cast

Cruise ID: 2021-001

Station: P26

Event #: 92

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 09 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |           | Sampler's Initials / Samples Taken |     |     |       |       |     | Sample Lists: Core_Samples |     |      |      |      |     |          | Comments   |
|----------|----------|----------|-------------------|-----------|------------------------------------|-----|-----|-------|-------|-----|----------------------------|-----|------|------|------|-----|----------|------------|
|          |          |          | Target Pressure   | Confirmed | MB                                 | OXY | SAL | Nut-F | Nut-C | DIC | Alk                        | DOC | CDOM | GLUT | FORM | CUT |          |            |
|          |          |          |                   | ✓         |                                    |     |     |       |       |     |                            |     |      |      |      |     | Pressure |            |
| 1        |          | 435      | Bot-10            | ✓         | 4318                               | x   |     | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 2        |          | 436      | 4000              | ✓         | 3999                               | xx  | xx  | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 3        |          | 437      | 3500              | ✓         | 3501                               | x   | x   | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 4        |          | 438      | 3000              | ✓         | 2999                               | x   | x   | xx    | xx    | x   | x                          | x   | x    |      |      |     |          |            |
| 5        |          | 439      | 2500              | ✓         | 2500                               | x   | x   | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 6        |          | 440      | 2000              | ✓         | 2000                               | x   | x   | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 7        |          | 441      | 1500              | ✓         | 1501                               | x   | x   | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 8        |          | 442      | 1250              | ✓         | 1249                               | x   |     | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 9        |          | 443      | 1000              | ✓         | 1001                               | xx  |     | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 10       |          | 444      | 800               | ✓         | 801                                | x   |     | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 11       |          | 445      | 600               | ✓         | 601                                | x   |     | x     | x     | xx  | xx                         | x   | x    |      |      |     |          |            |
| 12       |          | 446      | 400               | ✓         | 400                                | x   |     | x     | x     | x   | x                          | x   | x    |      |      |     |          |            |
| 13       |          | 447      | 300               | ✓         | 300                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 14       |          | 448      | 250               | ✓         | 250                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 15       |          | 449      | 200               | ✓         | 199                                | xx  |     | xx    |       | x   | x                          | x   | x    |      |      |     |          |            |
| 16       |          | 450      | 175               | ✓         | 176                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 17       |          | 451      | 150               | ✓         | 151                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 18       |          | 452      | 125               | ✓         | 125                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 19       |          | 453      | 100               | ✓         | 100                                | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 20       |          | 454      | 75                | ✓         | 75                                 | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 21       |          | 455      | 50                | ✓         | 50                                 | x   |     | x     |       | x   | x                          | x   | x    |      |      |     |          |            |
| 22       |          | 456      | 25                | ✓         | 25                                 | x   |     | x     |       | x   | x                          | xx  | xx   |      |      |     |          |            |
| 23       |          | 457      | 10                | ✓         | 10                                 | xx  |     | x     |       | x   | x                          | x   | x    |      |      |     |          | LEAKY VENT |
| 24       |          | 458      | 5                 | ✓         | 5                                  | x   |     | x     |       | x   | x                          | x   | x    | x    | x    | x   |          |            |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 4236 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1711 | 0911  |
| Bottom | 1818 |       |
| End    | 1951 |       |

Positional Information

Start

Lat: 50 ° 00.00 N

Lon: 145 ° 00.30 W

Bottom

Lat: 50 ° 00.00 N

Lon: 145 ° 00.12 W

End

Lat: 50 ° 0 016 N

Lon: 145 ° 0 130 W

Extra comments:

Deep

Cruise ID: 2021-001

Station: PA-014

Event #: 56 94

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 9 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |  | Sample Lists: Core_Samples |  |  |  |  |  |  |  |  |  | Comments |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|--|----------------------------|--|--|--|--|--|--|--|--|--|----------|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 1        | 1        | 459      | 10                | ✓ 10               | xx                                 |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 2        | 2        | 460      | 5                 | ✓ 5                | xx                                 |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 3        | 3        | 461      | 0                 | ✓ 2.1              | xx                                 |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 4        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 5        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 6        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 7        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 8        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 9        |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 10       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 11       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 12       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 13       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 14       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 15       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 16       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 17       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 18       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 19       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 20       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 21       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 22       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 23       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |
| 24       |          |          |                   |                    |                                    |  |                            |  |  |  |  |  |  |  |  |  |          |  |  |

Version: 13NOV2020

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

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

Bottom Depth: 4210 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 21 33 | 13 33 |
| Bottom | 21 39 |       |
| End    | 21 46 |       |

Positional Information  
Start  
Lat: 50 ° 2 850 N  
Lon: 144 ° 51 490 W

Bottom  
Lat: 50 ° 2 860 N  
Lon: 144 ° 51 470 W

End  
Lat: 50 ° 2 860 N  
Lon: 144 ° 51 490 W

Extra comments:

CTD to 350 m

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001 Station: HEC1 Event #: 106 Ship: JP Tully UTC Date (dd|mmm|yyyy): 12 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |       |     |     | Sample Lists: All_Samples |     |     |     |    |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-------|-----|-----|---------------------------|-----|-----|-----|----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | RF/MB                              | GC    | ML  | ML/MA | MA  | MA  | MA                        | MA  | MA  | MA  | MA |  |  |          |
|          |          |          |                   | ✓                  | OXY                                | Nut-F | SAL | CHL   | TOC | DOC | CDOM                      | O18 | SPC |     |    |  |  |          |
| 1        | 1        | 462      | Bot-5             | ✓                  | 12.9                               | x     | x   |       |     |     |                           |     |     |     |    |  |  |          |
| 2        | 2        | 463      | Bot-5             | ✓                  | 12.9                               |       |     |       |     |     |                           |     |     | xxx |    |  |  |          |
| 3        | 3        | 464      | Bot-5             | ✓                  | 12.9                               |       |     | x     |     | x   | x                         | x   | x   |     |    |  |  |          |
| 4        | 4        | 465      | 100               | ✓                  | 100.0                              | x     | x   |       |     |     |                           |     |     |     |    |  |  |          |
| 5        | 5        | 466      | 75                | ✓                  | 75.3                               | x     | x   |       |     |     |                           |     |     |     |    |  |  |          |
| 6        | 6        | 467      | 50                | ✓                  | 50.2                               | xx    | x   |       |     |     |                           |     |     |     |    |  |  |          |
| 7        | 7        | 468      | 50                | ✓                  | 50.1                               |       |     | x     |     | x   | x                         | x   | x   |     |    |  |  |          |
| 8        | 8        | 469      | 30                | ✓                  | 29.2                               | x     | x   |       | x   |     |                           |     |     |     |    |  |  |          |
| 9        | 9        | 470      | 20                | ✓                  | 21.0                               | x     | x   |       | x   |     |                           |     |     |     |    |  |  |          |
| 10       | 10       | 471      | 10                | ✓                  | 10.4                               | x     | x   |       | xx  |     |                           |     |     |     |    |  |  |          |
| 11       | 11       | 472      | 5                 | ✓                  | 4.7                                | x     | x   |       | x   |     |                           |     |     |     |    |  |  |          |
| 12       | 12       | 473      | 0                 | ✓                  | 2.6                                | x     | xx  |       | x   |     |                           |     |     |     |    |  |  |          |
| 13       | 13       | 474      | 0                 | ✓                  | 2.6                                |       |     | x     |     | x   | x                         | x   | x   |     |    |  |  |          |
| 14       | 14       | 475      | 0                 | ✓                  | 2.6                                |       |     |       |     |     |                           |     |     | xxx |    |  |  |          |
| 15       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 16       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 17       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 18       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 19       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 20       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 21       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 22       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 23       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |
| 24       |          |          |                   |                    |                                    |       |     |       |     |     |                           |     |     |     |    |  |  |          |

Version: 13NOV2020

Transparency International UK

Version: 13NOV2020

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

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

Bottom Depth: 138133 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2308 | 1508  |
| Bottom | 2311 | 1511  |
| End    | 2322 | 1522  |

Positional Information  
Start  
Lat: 52 ° 49.219 N  
Lon: 129 ° 50.699 W

Bottom  
Lat: 52 ° 49.223 N  
Lon: 129 ° 50.687 W

End  
Lat: 52 ° 49.218 N  
Lon: 129 ° 50.642 W

Extra comments:

Cruise ID: 2021-001

Station: SC69

Event #: 112

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 13 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | CHL |                           |  |  |  |  |  |  |  |          |
| 1        | 1        | 476      | Bot-05            | ✓ 676.9              | x                                  | x     | x     |     |                           |  |  |  |  |  |  |  |          |
| 2        | 2        | 477      | 600               | ✓ 601.4              | x                                  | x     | x     |     |                           |  |  |  |  |  |  |  |          |
| 3        | 3        | 478      | 500               | ✓ 500.0              | x                                  | xx    | xx    |     |                           |  |  |  |  |  |  |  |          |
| 4        | 4        | 479      | 400               | ✓ 399.8              | xx                                 | x     | x     |     |                           |  |  |  |  |  |  |  |          |
| 5        | 5        | 480      | 300               | ✓ 299.9              | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 6        | 6        | 481      | 250               | ✓ 250.1              | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 7        | 7        | 482      | 200               | ✓ 200.1              | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 8        | 8        | 483      | 150               | ✓ 149.8              | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 9        | 9        | 484      | 100               | ✓ 99.8               | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 10       | 10       | 485      | 75                | ✓ 75.0               | x                                  | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 11       | 11       | 486      | 50                | ✓ 49.9               | xx                                 | x     |       |     |                           |  |  |  |  |  |  |  |          |
| 12       | 12       | 487      | 30                | ✓ 30.2               | x                                  | x     |       | x   |                           |  |  |  |  |  |  |  |          |
| 13       | 13       | 488      | 20                | ✓ 19.9               | x                                  | xx    |       | x   |                           |  |  |  |  |  |  |  |          |
| 14       | 14       | 489      | 10                | ✓ 9.9                | x                                  | x     |       | xx  |                           |  |  |  |  |  |  |  |          |
| 15       | 15       | 490      | 5                 | ✓ 5.0                | x                                  | x     |       | x   |                           |  |  |  |  |  |  |  |          |
| 16       | 16       | 491      | 0                 | ✓ 2.5                | x                                  | x     |       | x   |                           |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |                           |  |  |  |  |  |  |  |          |

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

Watchkeeper(s): RF

Bottom Depth: 685 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0621 | 2221  |
| Bottom | 0634 | 2234  |
| End    | 0700 |       |

Positional Information

Start

Lat: 53 ° 5.130 N

Lon: 129 ° 19.450 W

Bottom

Lat: 53 ° 5.160 N

Lon: 129 ° 19.470 W

End

Lat: 53 ° 5.310 N

Lon: 129 ° 19.670 W

Extra comments:

Cruise ID: 2021-001

Station: SC61

Event #: 117

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 13 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: All_Samples |     |      |     |     | Comments |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|---------------------------|-----|------|-----|-----|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | MG/KS                              | Nut-F | Nut-C | CHL | SAL | TOC                       | DOC | CDOM | O18 | SPC |          |  |  |  |
| 1        |          | 492      | Bot-5             | ✓                    | 501                                | x     | xx    | xx  |     |                           |     |      |     |     |          |  |  |  |
| 2        |          | 493      | Bot-5             | ✓                    | 501                                |       |       |     | x   | x                         | x   | x    | x   |     |          |  |  |  |
| 3        |          | 494      | Bot-5             | ✓                    | 501                                |       |       |     |     |                           |     |      |     | xxx |          |  |  |  |
| 4        |          | 495      | 400               | ✓                    | 400                                | x     | x     | x   |     |                           |     |      |     |     |          |  |  |  |
| 5        |          | 496      | 300               | ✓                    | 300                                | x     | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 6        |          | 497      | 250               | ✓                    | 250                                | xx    | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 7        |          | 498      | 200               | ✓                    | 200                                | x     | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 8        |          | 499      | 150               | ✓                    | 150                                | x     | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 9        |          | 500      | 100               | ✓                    | 100                                | x     | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 10       |          | 501      | 75                | ✓                    | 75                                 | x     | x     |     |     |                           |     |      |     |     |          |  |  |  |
| 11       |          | 502      | 50                | ✓                    | 50                                 | x     | xx    |     |     |                           |     |      |     |     |          |  |  |  |
| 12       |          | 503      | 50                | ✓                    | 50                                 |       |       |     | x   | x                         | xx  | x    | x   |     |          |  |  |  |
| 13       |          | 504      | 30                | ✓                    | 30                                 | x     | x     | x   |     |                           |     |      |     |     |          |  |  |  |
| 14       |          | 505      | 20                | ✓                    | 20                                 | x     | x     | x   |     |                           |     |      |     |     |          |  |  |  |
| 15       |          | 506      | 10                | ✓                    | 10                                 | x     | x     | x   |     |                           |     |      |     |     |          |  |  |  |
| 16       |          | 507      | 5                 | ✓                    | 5                                  | x     | x     | xx  |     |                           |     |      |     |     |          |  |  |  |
| 17       |          | 508      | 0                 | ✓                    | 2                                  | xx    | x     | x   |     |                           |     |      |     |     |          |  |  |  |
| 18       |          | 509      | 0                 | ✓                    | 2                                  |       |       |     | x   | xx                        | x   | xx   | xx  |     |          |  |  |  |
| 19       |          | 510      | 0                 | ✓                    | 2                                  |       |       |     |     |                           |     |      |     | xxx |          |  |  |  |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                           |     |      |     |     |          |  |  |  |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                           |     |      |     |     |          |  |  |  |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                           |     |      |     |     |          |  |  |  |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                           |     |      |     |     |          |  |  |  |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                           |     |      |     |     |          |  |  |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 505 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1114 | 0314  |
| Bottom | 1124 |       |
| End    | 1147 |       |

Positional Information

Start

Lat: 53 ° 12.70 N

Lon: 129 ° 25.12 W

Bottom

Lat: 53 ° 12.76 N

Lon: 129 ° 25.10 W

End

Lat: 53 ° 12.83 N

Lon: 129 ° 25.08 W

Extra comments:

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001 Station: Doug02 Event #: 126 Ship: JP Tully UTC Date (dd:mmm:yyyy): 14 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |  |  |  | Sample Lists: All_Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|--|--|--|---------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | SPC                                |  |  |  |                           |  |  |  |          |
| 1        | 1        | 511      | Bot-5             | ✓ 171.4              | xxx                                |  |  |  |                           |  |  |  |          |
| 2        | 2        | 512      | 0                 | ✓ 2.0                | xxx                                |  |  |  |                           |  |  |  |          |
| 3        |          |          |                   |                      |                                    |  |  |  |                           |  |  |  |          |
| 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): RF

Bottom Depth: 176 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 02:00 | 1800  |
| Bottom | 02:03 | 1802  |
| End    | 02:07 | 1807  |

Positional Information  
Start  
Lat: 53 ° 57.821 N  
Lon: 128 ° 40.978 W

Bottom  
Lat: 53 ° 57.835 N  
Lon: 128 ° 40.982 W

End  
Lat: 53 ° 57.851 N  
Lon: 128 ° 40.972 W

Extra comments:

## Water Properties Group

Program  
STN List: All Stns

## Sampling Log

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

Cruise ID: 2021-001

Station: KIT1

Event #: 127

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 14 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     | Sample Lists: All Samples |  |  |  |  |  |  |  |  |  | Comments |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|---------------------------|--|--|--|--|--|--|--|--|--|----------|--|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | DIC |                           |  |  |  |  |  |  |  |  |  |          |  |
| 1        | 1        | 513      | Bot-5             | ✓                  | 201.1                              | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 2        | 2        | 514      | 150               | ✓                  | 150.0                              | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 3        | 3        | 515      | 100               | ✓                  | 100.0                              | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 4        | 4        | 516      | 75                | ✓                  | 75.0                               | xx    | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 5        | 5        | 517      | 50                | ✓                  | 49.8                               | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 6        | 6        | 518      | 30                | ✓                  | 30.3                               | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 7        | 7        | 519      | 20                | ✓                  | 20.2                               | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 8        | 8        | 520      | 15                | ✓                  | 14.7                               | x     | x   | xx                        |  |  |  |  |  |  |  |  |  |          |  |
| 9        | 9        | 521      | 10                | ✓                  | 9.9                                | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 10       | 10       | 522      | 5                 | ✓                  | 5.0                                | x     | x   | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 11       | 11       | 523      | 0                 | ✓                  | 2.6                                | x     | xx  | x                         |  |  |  |  |  |  |  |  |  |          |  |
| 12       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 13       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 14       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 15       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 16       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 17       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 18       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 19       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 20       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 21       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 22       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 23       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |
| 24       |          |          |                   |                    |                                    |       |     |                           |  |  |  |  |  |  |  |  |  |          |  |

Version: 13NOV2020

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

Profile type:  
ROS TRM X-Niskin other?  
Watchkeeper(s): RFBottom Depth: 207 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0230 | 1830  |
| Bottom | 0236 | 1836  |
| End    | 0248 | 1848  |

Positional Information  
Start  
Lat: 53 ° 56.240 N  
Lon: 128 ° 41.320 WBottom  
Lat: 53 ° 56.250 N  
Lon: 128 ° 41.320 WEnd  
Lat: 53 ° 56.250 N  
Lon: 128 ° 41.330 W

Extra comments:

Cruise ID: 2021-001

Station: Doug04

Event #: 128

Ship: JP Tully

UTC Date (dd mmm/yyyy): 14 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |       |     |     |     |     |      |     |     | Sample Lists: All_Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|-------|-----|-----|-----|-----|------|-----|-----|---------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure |                                    | OXY | Nut-F | SAL | CHL | TOC | DOC | CDOM | O18 | SPC |                           |  |  |  |          |
| 1        | 1        | 524      | Bot-5             | ✓                    | 213.7                              |     |       |     |     |     |     |      |     | xxx |                           |  |  |  |          |
| 2        | 2        | 525      | Bot-5             | ✓                    | 213.8                              |     |       | x   |     | x   | x   | x    | x   |     |                           |  |  |  |          |
| 3        | 3        | 526      | Bot-5             | ✓                    | 213.8                              | x   | x     |     |     |     |     |      |     |     |                           |  |  |  |          |
| 4        | 4        | 527      | 200               | ✓                    | 200.2                              | x   | x     |     |     |     |     |      |     |     |                           |  |  |  |          |
| 5        | 5        | 528      | 150               | ✓                    | 150.1                              | x   | xx    |     |     |     |     |      |     |     |                           |  |  |  |          |
| 6        | 6        | 529      | 100               | ✓                    | 100.1                              | x   | x     |     |     |     |     |      |     |     |                           |  |  |  |          |
| 7        | 7        | 530      | 75                | ✓                    | 74.9                               | xx  | x     |     |     |     |     |      |     |     |                           |  |  |  |          |
| 8        | 8        | 531      | 50                | ✓                    | 50.3                               | x   | x     |     |     |     |     |      |     |     |                           |  |  |  |          |
| 9        | 9        | 532      | 50                | ✓                    | 50.4                               |     |       | x   |     | x   | x   | x    | x   |     |                           |  |  |  |          |
| 10       | 10       | 533      | 30                | ✓                    | 30.1                               | x   | x     |     | x   |     |     |      |     |     |                           |  |  |  |          |
| 11       | 11       | 534      | 20                | ✓                    | 20.3                               | x   | x     |     | xx  |     |     |      |     |     |                           |  |  |  |          |
| 12       | 12       | 535      | 10                | ✓                    | 10.1                               | x   | x     |     | x   |     |     |      |     |     |                           |  |  |  |          |
| 13       | 13       | 536      | 5                 | ✓                    | 15.0                               | x   | x     |     | x   |     |     |      |     |     |                           |  |  |  |          |
| 14       | 14       | 537      | 0                 | ✓                    | 2.0                                | x   | x     |     | x   |     |     |      |     |     |                           |  |  |  |          |
| 15       | 15       | 538      | 0                 | ✓                    | 2.0                                |     |       | x   |     | x   | x   | x    | x   |     |                           |  |  |  |          |
| 16       | 16       | 539      | 0                 | ✓                    | 2.0                                |     |       |     |     |     |     |      |     | xxx |                           |  |  |  |          |
| 17       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 18       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 19       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 20       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 21       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 22       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 23       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |
| 24       |          |          |                   |                      |                                    |     |       |     |     |     |     |      |     |     |                           |  |  |  |          |

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

Watchkeeper(s): RF

Bottom Depth: 219 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0314 | 1914  |
| Bottom | 0320 | 1920  |
| End    | 0333 | 1933  |

Positional Information

Start

Lat: 53 ° 55.540 N

Lon: 128 ° 42.394 W

Bottom

Lat: 53 ° 55.546 N

Lon: 128 ° 42.412 W

End

Lat: 53 ° 55.595 N

Lon: 128 ° 42.475 W

Extra comments:

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: Doug-11

Event #: 134

Ship: JP Tully

UTC Date (dd/mmm/yyyy): 14 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      |     |     |     | Sample Lists: |  | All Samples | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|-----|-----|-----|---------------|--|-------------|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | TOC                                | DOC | CDOM | O18 | SAL | SPC |               |  |             |          |
| 1        | 1        | 540      | Bot-5             | ✓                  | 322.0                              |     |      |     |     |     |               |  |             |          |
| 2        | 2        | 541      | Bot-5             | ✓                  | 322.0                              | x   | x    | x   | x   | x   |               |  |             |          |
| 3        | 3        | 542      | 50                | ✓                  | 50.1                               | x   | xx   | xx  | x   | x   |               |  |             |          |
| 4        | 4        | 543      | 0                 | ✓                  | 2.1                                | xx  | x    | x   | xx  | x   |               |  |             |          |
| 5        | 5        | 544      | 0                 | ✓                  | 2.1                                |     |      |     |     |     |               |  |             |          |
| 6        |          |          |                   |                    |                                    |     |      |     |     | xxx |               |  |             |          |
| 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): RF

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

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 06:36 | 22:38 |
| Bottom | 06:43 | 22:43 |
| End    | 06:51 | 22:51 |

Positional Information  
Start  
Lat: 53 ° 49.802 N  
Lon: 128 ° 49.339 W

Bottom  
Lat: 53 ° 49.793 N  
Lon: 128 ° 49.297 W

End  
Lat: 53 ° 49.810 N  
Lon: 128 ° 49.308 W

Extra comments:

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001 Station: DeC-26 Event #: 137

Ship: JP Tully UTC Date (dd mmm yyyy): 14 02 21

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      |     |     |     | Sample Lists: All Samples |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|-----|-----|-----|---------------------------|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | TOC                                | DOC | CDOM | O18 | SAL | SPC |                           |  |          |
| 1        |          | 545      | Bot-5             | ✓                  | 158                                |     |      |     |     | xxx |                           |  |          |
| 2        |          | 546      | Bot-5             | ✓                  | 158                                | x   | x    | x   | x   | x   |                           |  |          |
| 3        |          | 547      | 50                | ✓                  | 50                                 | x   | xx   | xx  | x   | x   |                           |  |          |
| 4        |          | 548      | 0                 | ✓                  | 1.6                                | xx  | x    | x   | xx  | x   |                           |  |          |
| 5        |          | 549      | 0                 | ✓                  | 1.6                                |     |      |     |     | xxx |                           |  |          |
| 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): MG

Bottom Depth: 165 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0943 | 0143  |
| Bottom | 0952 |       |
| End    | 0959 |       |

Positional Information  
Start  
Lat: 53 ° 34.28 N  
Lon: 128 ° 51.06 W

Bottom  
Lat: 53 ° 34.32 N  
Lon: 128 ° 51.00 W

End  
Lat: 53 ° 34.33 N  
Lon: 128 ° 50.96 W

Extra comments:

Water Properties Group

Program  
STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001 Station: GC74 Event #: 140 Ship: JP Tully UTC Date (dd|mmm|yyyy): 14 | 02 | 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      |     |     | Sample Lists: All_Samples |  |  |  |  | Comments |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|-----|-----|---------------------------|--|--|--|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | TOC                                | DOC | CDOM | O18 | SAL | SPC                       |  |  |  |  |          |  |  |  |
| 1        |          | 550-350  | Bot-5             | ✓ 132              |                                    |     |      |     |     | xxx                       |  |  |  |  |          |  |  |  |
| 2        |          | 551-351  | Bot-5             | ✓ 132              | x                                  | x   | x    | x   | x   |                           |  |  |  |  |          |  |  |  |
| 3        |          | 552-352  | 50                | ✓ 50               | x                                  | xx  | xx   | x   | x   |                           |  |  |  |  |          |  |  |  |
| 4        |          | 553-353  | 0                 | ✓ 1.6              | xx                                 | x   | x    | x   | x   |                           |  |  |  |  |          |  |  |  |
| 5        |          | 554-354  | 0                 | ✓ 1.6              |                                    |     |      |     |     | xxx                       |  |  |  |  |          |  |  |  |
| 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): KS, MG

Bottom Depth: 137 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1844 | 1044  |
| Bottom | 1847 |       |
| End    | 1852 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 53 ° 15.794 N  |
|        | Lon: 127 ° 55.469 W |
| Bottom | Lat: 53 ° 15.78 N   |
|        | Lon: 127 ° 55.47 W  |
| End    | Lat: 53 ° 15.78 N   |
|        | Lon: 127 ° 55.48 W  |

Extra comments:

Water Properties Group

Program  
STN List: All Stns

Sampling Log

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

Cruise ID:

2021-001

Station:

GC44

Event #:

144 145

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 15 Feb 2021

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |    |    |    |    |    | Sample Lists: All_Samples |     |  |  | Comments |  |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|----|----|----|----|----|---------------------------|-----|--|--|----------|--|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | MA                                 | MA | MA | MA | RF | RF |                           |     |  |  |          |  |  |  |  |
| 1        | 1        | 555      | Bot-5             | ✓                  | 392.3                              |    |    |    |    |    |                           | xxx |  |  |          |  |  |  |  |
| 2        | 2        | 556      | Bot-5             | ✓                  | 392.3                              | x  | x  | x  | x  | x  |                           |     |  |  |          |  |  |  |  |
| 3        | 3        | 557      | 50                | ✓                  | 50.2                               | x  | xx | xx | x  | x  |                           |     |  |  |          |  |  |  |  |
| 4        | 4        | 558      | 0                 | ✓                  | 26                                 | xx | x  | x  | x  | x  |                           |     |  |  |          |  |  |  |  |
| 5        | 5        | 559      | 0                 | ✓                  | 26                                 |    |    |    |    |    |                           | xxx |  |  |          |  |  |  |  |
| 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): RF

Bottom Depth: 393 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0314 | 1914  |
| Bottom | 0322 | 1922  |
| End    | 0331 | 1931  |

Positional Information  
Start  
Lat: 53 ° 25.910 N  
Lon: 128 ° 27.020 W

Bottom  
Lat: 53 ° 25.900 N  
Lon: 128 ° 27.020 W

End  
Lat: 53 ° 25.900 N  
Lon: 128 ° 27.040 W

Extra comments:

Cruise ID: 2021-001

Station: Doug-16

Event #: 155

Ship: JP Tully

UTC Date (dd mmm yyyy): 15 02 21

| Niskin # | Firing # | Sample # | Rosette Operation |                    |     | Sampler's Initials / Samples Taken |      |     |     |     |     | Sample Lists: All_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|-----|------------------------------------|------|-----|-----|-----|-----|---------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure |     |                                    |      |     |     |     |     |                           |  |  |  |  |  |          |
|          |          |          | ✓                 | Pressure           | TOC | DOC                                | CDOM | O18 | SAL | SPC |     |                           |  |  |  |  |  |          |
| 1        |          | 560      | Bot-5             | ✓                  | 384 |                                    |      |     |     |     | xxx |                           |  |  |  |  |  |          |
| 2        |          | 561      | Bot-5             | ✓                  | 384 | x                                  | x    | x   | x   | x   |     |                           |  |  |  |  |  |          |
| 3        |          | 562      | 50                | ✓                  | 50  | xx                                 | xx   | x   | x   | x   |     |                           |  |  |  |  |  |          |
| 4        |          | 563      | 0                 | ✓                  | 1.5 | x                                  | x    | xx  | x   | x   |     |                           |  |  |  |  |  |          |
| 5        |          | 564      | 0                 |                    | 1.6 |                                    |      |     |     |     | xxx |                           |  |  |  |  |  |          |
| 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): MG

Bottom Depth: 389 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1048 | 0248  |
| Bottom | 1055 |       |
| End    | 1104 |       |

Positional Information

Start

Lat: 53 ° 46.61 N

Lon: 128 ° 54.81 W

Bottom

Lat: 53 ° 46.82 N

Lon: 128 ° 54.79 W

End

Lat: 53 ° 46.80 N

Lon: 128 ° 54.76 W

Extra comments:

Cruise ID: 2021-001

Station: FOC1

Event #: 157

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 15 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |     |      |     | Sample Lists: All_Samples |     |  |  |  |  | Comments |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|-----|------|-----|---------------------------|-----|--|--|--|--|----------|--|
|          |          |          | Target Pressure   | Confirmed Pressure | MG                                 | Nut-F | CHL | TOC | DOC | CDOM | O18 | SPC                       |     |  |  |  |  |          |  |
|          |          |          | ✓                 | Pressure           |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 1        |          | 565      | Bot-5             | ✓                  | 364                                |       |     |     |     |      |     |                           | xxx |  |  |  |  |          |  |
| 2        |          | 566      | Bot-5             | ✓                  | 364                                |       |     |     | x   | x    | x   | x                         |     |  |  |  |  |          |  |
| 3        |          | 567      | Bot-5             | ✓                  | 364                                | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 4        |          | 568      | 300               | ✓                  | 300                                | xx    | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 5        |          | 569      | 250               | ✓                  | 250                                | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 6        |          | 570      | 200               | ✓                  | 200                                | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 7        |          | 571      | 150               | ✓                  | 150                                | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 8        |          | 572      | 100               | ✓                  | 100                                | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 9        |          | 573      | 75                | ✓                  | 75                                 | x     | xx  |     |     |      |     |                           |     |  |  |  |  |          |  |
| 10       |          | 574      | 50                | ✓                  | 51                                 | x     | x   |     |     |      |     |                           |     |  |  |  |  |          |  |
| 11       |          | 575      | 50                | ✓                  | 51                                 |       |     |     | x   | x    | xx  | x                         |     |  |  |  |  |          |  |
| 12       |          | 576      | 30                | ✓                  | 30                                 | x     | x   | x   |     |      |     |                           |     |  |  |  |  |          |  |
| 13       |          | 577      | 20                | ✓                  | 20                                 | x     | x   | x   |     |      |     |                           |     |  |  |  |  |          |  |
| 14       |          | 578      | 10                | ✓                  | 10                                 | x     | x   | x   |     |      |     |                           |     |  |  |  |  |          |  |
| 15       |          | 579      | 5                 | ✓                  | 5                                  | x     | x   | x   |     |      |     |                           |     |  |  |  |  |          |  |
| 16       |          | 580      | 0                 | ✓                  | 26                                 | x     | x   | xx  |     |      |     |                           |     |  |  |  |  |          |  |
| 17       |          | 581      | 0                 | ✓                  | 26                                 |       |     |     | xx  | xx   | x   | x                         |     |  |  |  |  |          |  |
| 18       |          | 582      | 0                 | ✓                  | 26                                 |       |     |     |     |      |     |                           | xxx |  |  |  |  |          |  |
| 19       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 20       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 21       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 22       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 23       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |
| 24       |          |          |                   |                    |                                    |       |     |     |     |      |     |                           |     |  |  |  |  |          |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): MG

Bottom Depth: 370 m

Transmisso Cleaned: Y N

Time UTC Local

Start 1622 0822

Bottom 1630

End 1651

Positional Information

Start Lat: 53 ° 44.17 N  
Lon: 129 ° 01.85 W

Bottom Lat: 53 ° 44.17 N  
Lon: 129 ° 01.84 W

End Lat: 53 ° 44.19 N  
Lon: 129 ° 01.80 W

Extra comments:

Cruise ID: 2021-001

Station: Doug-26

Event #: 158

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 15 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |           | Sampler's Initials / Samples Taken |          |       |       | Sample Lists: All_Samples |  |  |  |  |  |  |  |  |  | Comments    |
|----------|----------|----------|-------------------|-----------|------------------------------------|----------|-------|-------|---------------------------|--|--|--|--|--|--|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed | ✓                                  | Pressure | MR/MG | KS/CW |                           |  |  |  |  |  |  |  |  |  |             |
|          |          |          |                   |           |                                    |          | OXY   | SAL   |                           |  |  |  |  |  |  |  |  |  |             |
| 1        |          | 583      | 350               | ✓         | 350                                | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 30 seconds  |
| 2        |          | 584      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 60 seconds  |
| 3        |          | 585      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 90 seconds  |
| 4        |          | 586      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 120 seconds |
| 5        |          | 587      | 250               | ✓         | 250                                | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 30 seconds  |
| 6        |          | 588      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 60 seconds  |
| 7        |          | 589      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 90 seconds  |
| 8        |          | 590      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 120 seconds |
| 9        |          | 591      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 150 seconds |
| 10       |          | 592      | 150               | ✓         | 150                                | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 30 seconds  |
| 11       |          | 593      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 60 seconds  |
| 12       |          | 594      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 90 seconds  |
| 13       |          | 595      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 120 seconds |
| 14       |          | 596      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 150 seconds |
| 15       |          | 597      | 100               | ✓         | 100                                | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 30 seconds  |
| 16       |          | 598      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 60 seconds  |
| 17       |          | 599      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 90 seconds  |
| 18       |          | 600      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 120 seconds |
| 19       |          | 601      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 150 seconds |
| 20       |          | 602      | 50                | ✓         | 50                                 | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 30 seconds  |
| 21       |          | 603      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 60 seconds  |
| 22       |          | 604      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 90 seconds  |
| 23       |          | 605      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 120 seconds |
| 24       |          | 606      |                   | ✓         | ↓                                  | xx       | xx    |       |                           |  |  |  |  |  |  |  |  |  | 150 seconds |

Version: 13NOV2020

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

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): HG

Bottom Depth: 396 m

Transmisso Cleaned: Y/N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1732 | 0932  |
| Bottom | 1739 |       |
| End    | 1802 |       |

Positional Information

Start

Lat: 53 ° 40.41 N

Lon: 129 ° 07.34 W

Bottom

Lat: 53 ° 40.41 N

Lon: 129 ° 07.36 W

End

Lat: 53 ° 40.42 N

Lon: 129 ° 07.32 W

Extra comments:

Flushing experiment

Water Properties Group

Program STN List: All\_Stns

Sampling Log

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

Cruise ID: 2021-001

Station: Doug-31

Event #: 160

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 15 | 02 | 21

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

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      |     |     |     | Sample Lists: All Samples |  |  |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|-----|-----|-----|---------------------------|--|--|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | TOC                                | DOC | CDOM | O18 | SAL | SPC |                           |  |  |  |  |  |  |  |  |  |          |
| 1        |          | 607      | Bot-5             | ✓                  | 303                                |     |      |     |     | xxx |                           |  |  |  |  |  |  |  |  |  |          |
| 2        |          | 608      | Bot-5             | ✓                  | 303                                | x   | x    | x   | x   | x   |                           |  |  |  |  |  |  |  |  |  |          |
| 3        |          | 609      | 50                | ✓                  | 50                                 | x   | xx   | xx  | x   | x   |                           |  |  |  |  |  |  |  |  |  |          |
| 4        |          | 610      | 0                 | ✓                  | 1.8                                | xx  | x    | x   | xx  | x   |                           |  |  |  |  |  |  |  |  |  |          |
| 5        |          | 611      | 0                 | ✓                  | 1.8                                |     |      |     |     | xxx |                           |  |  |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                    |                                    |     |      |     |     |     |                           |  |  |  |  |  |  |  |  |  |          |

Bottom Depth: 307 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1926 | 1126  |
| Bottom | 1932 | 1132  |
| End    | 1941 | 1141  |

Positional Information  
Start Lat: 53 ° 36.75 N  
Lon: 129 ° 12.73 W

Bottom Lat: 53 ° 36.75 N  
Lon: 129 ° 12.74 W

End Lat: 53 ° 36.76 N  
Lon: 129 ° 12.75 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |     |      |     | Sample Lists: All_Samples |     |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-----|------|-----|---------------------------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | TOC                                | DOC | CDOM | O18 | SAL                       | SPC |  |  |          |
| 1        | 1        | 612      | Bot-5             | ✓ 457.0            |                                    |     |      |     |                           | xxx |  |  |          |
| 2        | 2        | 613      | Bot-5             | ✓ 457.0            | x                                  | x   | x    | x   | x                         |     |  |  |          |
| 3        | 3        | 614      | 50                | ✓ 50.5             | x                                  | xx  | xx   | x   | x                         |     |  |  |          |
| 4        | 4        | 615      | 0                 | ✓ 2.3              | xx                                 | x   | x    | x   | x                         |     |  |  |          |
| 5        | 5        | 616      | 0                 | ✓ 2.2              |                                    |     |      |     |                           | xxx |  |  |          |
| 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): RF

Bottom Depth: 454 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2221 | 1421  |
| Bottom | 2230 | 1430  |
| End    | 2240 | 1440  |

Positional Information

Start

Lat: 53 ° 22.262 N

Lon: 129 ° 11.606 W

Bottom

Lat: 53 ° 22.259 N

Lon: 129 ° 11.636 W

End

Lat: 53 ° 22.261 N

Lon: 129 ° 11.641 W

Extra comments:

Water Properties Group

Program STN List: All Stns

Sampling Log

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

Cruise ID: 2021-001

Station: HAK1

Event #: 164

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 16 | 02 | 21

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |     | Sample Lists: All_Samples |      |     |     |     | Comments |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|-----|---------------------------|------|-----|-----|-----|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | CHL | SAL | TOC | DOC                       | CDOM | O18 | SPC | DIC |          |  |  |  |
| 1        |          | 617      | Bot-5             | ✓ 135              |                                    |       |     |     |     |                           |      |     | xxx |     |          |  |  |  |
| 2        |          | 618      | Bot-5             | ✓ 136              |                                    |       |     | x   | x   | x                         | x    | x   |     |     |          |  |  |  |
| 3        |          | 619      | Bot-5             | ✓ 135              | x                                  | x     |     |     |     |                           |      |     |     |     |          |  |  |  |
| 4        |          | 620      | 100               | ✓ 100              | x                                  | x     |     |     |     |                           |      |     |     |     |          |  |  |  |
| 5        |          | 621      | 75                | ✓ 74               | xx                                 | x     |     |     |     |                           |      |     |     |     |          |  |  |  |
| 6        |          | 622      | 50                | ✓ 50               | x                                  | x     |     |     |     |                           |      |     |     | xx  |          |  |  |  |
| 7        |          | 623      | 50                | ✓ 50               |                                    |       |     | x   | x   | x                         | xx   | x   |     |     |          |  |  |  |
| 8        |          | 624      | 40                | ✓ 40               | x                                  | xx    |     |     |     |                           |      |     |     | xx  |          |  |  |  |
| 9        |          | 625      | 30                | ✓ 30               | x                                  | x     | x   |     |     |                           |      |     |     | xx  |          |  |  |  |
| 10       |          | 626      | 20                | ✓ 20               | x                                  | x     | x   |     |     |                           |      |     |     |     |          |  |  |  |
| 11       |          | 627      | 10                | ✓ 10               | x                                  | x     | x   |     |     |                           |      |     |     |     |          |  |  |  |
| 12       |          | 628      | 5                 | ✓ 5                | x                                  | x     | xx  |     |     |                           |      |     |     |     |          |  |  |  |
| 13       |          | 629      | 0                 | ✓ 2.8              | x                                  | x     | x   |     |     |                           |      |     |     |     |          |  |  |  |
| 14       |          | 630      | 0                 | ✓ 2.2              |                                    |       |     | x   | xx  | xx                        | x    | x   |     |     |          |  |  |  |
| 15       |          | 631      | 0                 | ✓ 2.1              |                                    |       |     |     |     |                           |      |     | xxx |     |          |  |  |  |
| 16       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 17       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 18       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 19       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 20       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 21       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 22       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 23       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |
| 24       |          |          |                   |                    |                                    |       |     |     |     |                           |      |     |     |     |          |  |  |  |

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

Bottom Depth: 141 m  
Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1504 | 0704  |
| Bottom | 1507 |       |
| End    | 1520 |       |

Positional Information

|      |             |   |
|------|-------------|---|
| Lat: | 51 ° 42.63  | N |
| Lon: | 128 ° 13.71 | W |

Start

|      |             |   |
|------|-------------|---|
| Lat: | 51 ° 42.65  | N |
| Lon: | 128 ° 13.72 | W |

Bottom

|      |             |   |
|------|-------------|---|
| Lat: | 51 ° 42.67  | N |
| Lon: | 128 ° 13.62 | W |

End

Extra comments:

**Water Properties Group**

Cruise ID: 2021-001

Program STN List: All Stns

Station: KC10

**Sampling Log**

Event #: 166

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

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 16 | 02 | 21

Sample Lists: All Samples

Comments

Profile type:

☒ ROS ☐ TRM ☐ X-Niskin ☐ other?

2021-001

**Station:**

KC10

Event #: 166

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 16 | 02 | 21

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
 Watchkeeper(s): 323

Bottom Depth: 323 m  
Transmisso Cleaned: Y / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 1729       | 0929         |
| <b>Bottom</b> | 1736       |              |
| <b>End</b>    | 1754       |              |

| Positional Information |      |             |   |
|------------------------|------|-------------|---|
| Start                  | Lat: | 51 ° 39.16  | N |
|                        | Lon: | 127 ° 57.10 | W |

|        |      |             |   |
|--------|------|-------------|---|
| Bottom | Lat: | 51 ° 39.16  | N |
|        | Lon: | 127 ° 57.13 | W |

|      |     |   |       |   |
|------|-----|---|-------|---|
| Lat: | 51  | ° | 39.17 | N |
| Lon: | 127 | ° | 57.15 | W |

**Extra comments:**

| Cruise ID: |          |          | 2021-001          |                    | Station:                           |       | KC10 |     | Event #: |     | 166  |                           | Ship: |     | JP Tully |          | Comments |  |                                       |
|------------|----------|----------|-------------------|--------------------|------------------------------------|-------|------|-----|----------|-----|------|---------------------------|-------|-----|----------|----------|----------|--|---------------------------------------|
| Niskin #   | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |      |     |          |     |      | Sample Lists: All_Samples |       |     |          | Comments |          |  |                                       |
|            |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | CHL  | SAL | TOC      | DOC | CDOM | O18                       | SPC   | DIC |          |          |          |  |                                       |
| 1          |          | 632      | Bot-5             | ✓                  | 318                                | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  | HgCl dispenser not primed 2 3/4 shot. |
| 2          |          | 633      | 300               | ✓                  | 300                                | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 3          |          | 634      | 250               | ✓                  | 250                                | x     | xx   |     |          |     |      |                           |       |     |          | xx       |          |  |                                       |
| 4          |          | 635      | 200               | ✓                  | 200                                | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 5          |          | 636      | 150               | ✓                  | 150                                | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 6          |          | 637      | 100               | ✓                  | 100                                | xx    | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 7          |          | 638      | 75                | ✓                  | 75                                 | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 8          |          | 639      | 50                | ✓                  | 50                                 | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 9          |          | 640      | 30                | ✓                  | 30                                 | x     | x    |     |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 10         |          | 641      | 20                | ✓                  | 20                                 | x     | x    | x   |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 11         |          | 642      | 15                | ✓                  | 15                                 | x     | x    | xx  |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 12         |          | 643      | 10                | ✓                  | 10                                 | x     | x    | x   |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 13         |          | 644      | 5                 | ✓                  | 5                                  | x     | x    | x   |          |     |      |                           |       |     |          | x        |          |  |                                       |
| 14         |          | 645      | 0                 | ✓                  | 1.6                                | x     | x    | x   |          |     |      |                           |       |     |          |          |          |  |                                       |
| 15         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 16         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 17         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 18         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 19         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 20         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 21         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 22         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 23         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |
| 24         |          |          |                   |                    |                                    |       |      |     |          |     |      |                           |       |     |          |          |          |  |                                       |

Fired bottles 15-24 @ 5m POSSIBLE HYDRAULIC LEAK

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

Version: 13NOV2020

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