

Water Properties Group

Program  
STN List: La\_Peouse

Sampling Log

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

Cruise ID: 2020-005 Station: LB01 Event #: 1 Ship: JP fully UTC Date (dd mmm/yyyy): 11/06/2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core_Samples |      |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|------|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed V Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 | QIC                        |      |  |  |  |  |            |
| 1        |          | 1        | Bot-5             | ✓ 3Z                 | x                                  | xx    |     | x   |      |     | x                          |      |  |  |  |  |            |
| 2        |          | 2        | 20                | ✓ 20                 | x                                  | x     |     | xx  |      | xx  | xx                         |      |  |  |  |  |            |
| 3        |          | 3        | 10                | ✓ 10S                | xx                                 | x     |     | x   |      | xx  | x                          |      |  |  |  |  |            |
| 4        |          | 4        | 5                 | ✓ 5.0                | x                                  | x     |     | x   | xx   | xx  | x                          |      |  |  |  |  | Fluro - 25 |
| 5        |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 6        |          |          |                   |                      |                                    |       |     |     |      |     | I *                        | Hgce |  |  |  |  |            |
| 7        |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 8        |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 9        |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 10       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 11       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 12       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 13       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 14       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 15       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 16       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 17       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 18       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 19       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 20       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 21       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 22       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 23       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |
| 24       |          |          |                   |                      |                                    |       |     |     |      |     |                            |      |  |  |  |  |            |

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

Bottom Depth: 1a m  
Transmisso Cleaned: \$ / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2040 | 1340  |
| Bottom | 2042 |       |
| End    | 2047 |       |

Positional Information  
Lat: 49° 0' Vb. A/O N  
Lon: 124° 0' 59.420 W

Lat: 49° 0' tfo. UD N  
Lon: 124° 0' 59.420 W

Lat: 49° 0' 4# 3/O. N  
Lon: 124° 0' 59.420 W

Extra comments:

Cruise ID: 2020-005

Station: LB02

Event #: 2

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 22|06|2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core Samples |    |       |     |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|----|-------|-----|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4                        | DA | Phyto |     |  |  |  |  |          |
| 1        | 1        | 5        | Bot-10            | ✓                    | 46.                                | x     | x   |     | x    |                            |    |       |     |  |  |  |  |          |
| 2        | 2        | 6        | 30                | ✓                    | 30                                 | x     | x   |     | xx   |                            |    |       |     |  |  |  |  |          |
| 3        | 3        | 7        | 20                | ✓                    | 20                                 | xx    | x   |     | x    |                            | xx |       |     |  |  |  |  |          |
| 4        | 4        | 8        | 10                | ✓                    | 10.                                | x     | x   |     | x    |                            | xx |       |     |  |  |  |  |          |
| 5        | 5        | 9        | 5                 | ✓                    | 5.                                 | x     | xx  |     | x    | xx                         | xx | x     | xxx |  |  |  |  | Fluo: B  |
| 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: 56 m

Transmisso Cleaned: Y N

|        |      |       |
|--------|------|-------|
| Time   | UTC  | Local |
| Start  | 2114 | 1414  |
| Bottom | 2116 |       |
| End    | 2122 |       |

Positional Information

Start

Lat: 48 ° 39.050 N

Lon: 125 ° 02.210 W

Bottom

Lat: 48 ° 39.040 N

Lon: 125 ° 02.090 W

End

Lat: 48 ° 39.050 N

Lon: 125 ° 02.150 W

Extra comments:



| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 |                            |  |  |  |  |  |          |
| 1        | 1        | 11       | Bot-10            | ✓ 104                | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 2        | 2        | 12       | 75                | ✓ 75                 | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 3        | 3        | 13       | 50                | ✓ 50                 | x                                  | x     |     | x   |      |     |                            |  |  |  |  |  |          |
| 4        | 4        | 14       | 30                | ✓ 31                 | x                                  | x     |     | x   |      |     |                            |  |  |  |  |  |          |
| 5        | 5        | 15       | 20                | ✓ 20                 | x                                  | x     |     | x   |      | xx  |                            |  |  |  |  |  |          |
| 6        | 6        | 16       | 10                | ✓ 10                 | xx                                 | x     |     | xx  |      | xx  |                            |  |  |  |  |  |          |
| 7        | 7        | 17       | 5                 | ✓ 5                  | x                                  | xx    |     | 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): GC

Bottom Depth: 114 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2228 | 1528  |
| Bottom | 2230 |       |
| End    | 2239 |       |

Positional Information

StartLat: 48 ° 35 660 N

StartLon: 125 ° 08.717 W

BottomLat: 48 ° 35 650 N

BottomLon: 125 ° 08.717 W

EndLat: 48 ° 35 610 N

EndLon: 125 ° 08.712 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |     |       |     |     | Sample Lists: Custom_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-----|-------|-----|-----|------------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure |                                    | OXY | Nut-F | SAL | CHL | HPLC                         |  |  |  |  |  |  |  |          |
| 1        | 1        | 18       | 5                 | <input checked="" type="checkbox"/> 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): HS

Bottom Depth: 103 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 00:49 | 17:49 |
| Bottom | 00:52 |       |
| End    | 00:56 |       |

Positional Information

Start

Lat: 48 ° 33.910 N  
Lon: 125 ° 11.950 W

▼

Bottom

Lat: 48 ° 33.880 N  
Lon: 125 ° 11.940 W

▼

End

Lat: 48 ° 33.850 N  
Lon: 125 ° 11.950 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 |                            |  |  |  |  |  |          |
| 1        | 1        | 19       | Bot-10            | <input checked="" type="checkbox"/>                    | 106                                | x     | x   |     |      |     |                            |  |  |  |  |  |          |
| 2        | 2        | 20       | 100               | <input checked="" type="checkbox"/>                    | 100                                | x     | x   |     |      |     |                            |  |  |  |  |  |          |
| 3        | 3        | 21       | 75                | <input checked="" type="checkbox"/>                    | 75                                 | xx    | x   |     |      |     |                            |  |  |  |  |  |          |
| 4        | 4        | 22       | 50                | <input checked="" type="checkbox"/>                    | 50                                 | x     | x   |     | x    |     |                            |  |  |  |  |  |          |
| 5        | 5        | 23       | 30                | <input checked="" type="checkbox"/>                    | 30                                 | x     | xx  |     | xx   |     |                            |  |  |  |  |  |          |
| 6        | 6        | 24       | 20                | <input checked="" type="checkbox"/>                    | 20                                 | x     | x   |     | x    |     | xx                         |  |  |  |  |  |          |
| 7        | 7        | 25       | 10                | <input checked="" type="checkbox"/>                    | 10                                 | x     | x   |     | x    |     | xx                         |  |  |  |  |  |          |
| 8        | 8        | 26       | 5                 | <input checked="" type="checkbox"/>                    | 5                                  | x     | x   |     | x    | xx  | xx                         |  |  |  |  |  |          |
| 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): HR

Bottom Depth: 116 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 01:36 | 18:36 |
| Bottom | 01:39 |       |
| End    | 01:51 |       |

Positional Information

Start

Lat: 48 ° 32.100 N

Lon: 125 ° 15.600 W

Bottom

Lat: 48 ° 32.110 N

Lon: 125 ° 15.630 W

End

Lat: 48 ° 32.140 N

Lon: 125 ° 15.630 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Custom_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|------------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC |                              |  |  |  |  |  |  |  |          |
| 1        |          | 27       | 5                 | ✓ 5                  |                                    | x     | X   | xx  | xx   |                              |  |  |  |  |  |  |  |          |
| 2        |          | 5015     | 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): SR

Bottom Depth: 158 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0638 | 2338  |
| Bottom | 0640 |       |
| End    | 0644 |       |

Positional Information

Start

Lat: 48 ° 28.640 N  
Lon: 125 ° 22 210 W

Bottom

Lat: 48 ° 28.640 N  
Lon: 125 ° 22 230 W

End

Lat: 48 ° 28.650 N  
Lon: 125 ° 22.280 W

Extra comments:

Cruise ID: 2020-005

Station: LB08

Event #: 23

Ship: JP Tully

UTC Date (dd mmm yyyy): 23 June 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  | Comments                   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|--|--|--|--|--|----------------------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 | DIC                        |  |  |  |  |  |                            |
| 1        |          | 28       | Bot-10            | ✓ 144                | x                                  | x     |     |     |      |     | x                          |  |  |  |  |  |                            |
| 2        |          | 29       | 125               | ✓                    | xx                                 | x     |     |     |      |     |                            |  |  |  |  |  |                            |
| 3        |          | 30       | 100               | ✓                    | x                                  | x     |     |     |      | xx  |                            |  |  |  |  |  | Ammonia LNSW NOT COLLECTED |
| 4        |          | 31       | 100               | ✓                    | x                                  | x     |     |     |      |     | xx                         |  |  |  |  |  |                            |
| 5        |          | 32       | 75                | ✓                    | x                                  | xx    |     |     |      |     | x                          |  |  |  |  |  |                            |
| 6        |          | 33       | 50                | ✓                    | x                                  | x     |     | x   |      |     | xx                         |  |  |  |  |  |                            |
| 7        |          | 34       | 30                | ✓                    | x                                  | x     |     | xx  |      |     | x                          |  |  |  |  |  |                            |
| 8        |          | 35       | 20                | ✓                    | x                                  | x     |     | x   |      | xx  | x                          |  |  |  |  |  |                            |
| 9        |          | 36       | 10                | ✓                    | x                                  | x     |     | x   |      | xx  | x                          |  |  |  |  |  |                            |
| 10       |          | 37       | 5                 | ✓                    | x                                  | x     | x   | x   | xx   | xx  | x                          |  |  |  |  |  |                            |
| 11       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 12       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 13       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 14       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 15       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 16       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 17       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 18       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 19       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 20       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 21       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 22       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 23       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |
| 24       |          |          |                   |                      |                                    |       |     |     |      |     |                            |  |  |  |  |  |                            |

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

Watchkeeper(s): SR

Bottom Depth: 148 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1108 | 0408  |
| Bottom | 1111 |       |
| End    | 1122 |       |

Positional Information

Start

Lat: 48° 25.320 N  
Lon: 125° 28.850 W

Bottom

Lat: 48° 25.340 N  
Lon: 125° 28.860 W

End

Lat: 48° 25.330 N  
Lon: 125° 28.870 W

Extra comments:

# Water Properties Group

Program  
STN List: La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LB09

Event #:

24

Ship:

JP Tully

UTC Date (dd|mmm|yyyy):

23 June 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 |                            |  |  |  |  |  |          |
| 1        |          | 38       | Bot-10            | ✓ 146              | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 2        |          | 39       | 125               | ✓ 126              | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 3        |          | 40       | 100               | ✓                  | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 4        |          | 41       | 75                | ✓                  | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 5        |          | 42       | 50                | ✓                  | x                                  | x     |     | x   |      |     |                            |  |  |  |  |  |          |
| 6        |          | 43       | 30                |                    | x                                  | xx    |     | x   |      |     |                            |  |  |  |  |  |          |
| 7        |          | 44       | 20                |                    | x                                  | x     |     | xx  |      | xx  |                            |  |  |  |  |  |          |
| 8        |          | 45       | 10                |                    | xx                                 | x     |     | x   |      | xx  |                            |  |  |  |  |  |          |
| 9        |          | 46       | 5                 |                    | x                                  | x     | x   | x   | xx   | 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):

SR

Bottom Depth: 152 m

Transmisso Cleaned: (Y) N

Time UTC Local

Start 1211 0511

Bottom 1214

End 1224

Positional Information

Start Lat: 48 ° 21.997 N

Lon: 125 ° 34.717 W

Bottom Lat: 48 ° 22.010 N

Lon: 125 ° 34.720 W

End Lat: 48 ° 22.030 N

Lon: 125 ° 34.720 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Custom Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-------|-----|-----|------|------------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | OXY                                | Nut-F | SAL | CHL | HPLC |                              |  |  |  |  |  |  |  |          |
| 1        |          | 47       | 5                 | <input checked="" type="checkbox"/> 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): SR

Bottom Depth: 152 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1342 | 0642  |
| Bottom | 1344 |       |
| End    | 1349 |       |

Positional Information

Start

Lat: 48 ° 18.610 N

Lon: 125 ° 41.280 W

Bottom

Lat: 48 ° 18.600 N

Lon: 125 ° 41.250 W

End

Lat: 48 ° 18.610 N

Lon: 125 ° 41.220 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|-----|----------------------------|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | NH4 |                            |  |  |  |  |  |          |
| 1        |          | 48       | Bot-10            | ✓ 203              | x                                  | xx    |     |     |      |     |                            |  |  |  |  |  |          |
| 2        |          | 49       | 175               | ✓                  | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 3        |          | 50       | 125               | ✓                  | xx                                 | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 4        |          | 51       | 100               | ✓ 101              | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 5        |          | 52       | 75                | ✓                  | x                                  | x     |     |     |      |     |                            |  |  |  |  |  |          |
| 6        |          | 53       | 50                | ✓                  | x                                  | x     |     | x   |      |     |                            |  |  |  |  |  |          |
| 7        |          | 54       | 30                | ✓                  | xx                                 | x     |     | x   |      |     |                            |  |  |  |  |  |          |
| 8        |          | 55       | 20                | ✓                  | x                                  | x     |     | x   |      | xx  |                            |  |  |  |  |  |          |
| 9        |          | 56       | 10                |                    | x                                  | xx    |     | xx  |      | xx  |                            |  |  |  |  |  |          |
| 10       |          | 57       | 5                 |                    | x                                  | x     |     | x   | xx   | xx  |                            |  |  |  |  |  |          |
| 11       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 12       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 13       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 14       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 15       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 16       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 17       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 18       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 19       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 20       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 21       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 22       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 23       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |
| 24       |          |          |                   |                    |                                    |       |     |     |      |     |                            |  |  |  |  |  |          |

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

Watchkeeper(s): SR

Bottom Depth: 207 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1513 | 0813  |
| Bottom | 1517 |       |
| End    | 1528 |       |

Positional Information

Start

Lat: 48 ° 15.150 N

Lon: 125 ° 47.730 W

Bottom

Lat: 48 ° 15.150 N

Lon: 125 ° 47.690 W

End

Lat: 48 ° 15.120 N

Lon: 125 ° 47.570 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LB12

Event #:

28

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 23 June 2020

| 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 | NH4 | DA | Phyto |          |  |          |  |  |                 |
| 1        |          | 58       | Bot-10            | ✓ 475                | x                                  |     | x     | x     |                            |      |     |    |       |          |  |          |  |  |                 |
| 2        |          | 59       | 400               | ✓ 400                | xx                                 | x   | xx    | xx    |                            |      |     |    |       |          |  |          |  |  |                 |
| 3        |          | 60       | 300               | ✓ 250                | x                                  |     | x     |       |                            |      |     |    |       | 60       |  | 60       |  |  | SAL NOT SAMPLED |
| 4        |          | 61       | 250               | ✓ 300                | x                                  |     | x     |       |                            |      |     |    |       | Nut-F    |  | OXY      |  |  |                 |
| 5        |          | 62       | 250               | ✓ 250                | x                                  |     | x     |       |                            |      |     |    |       | LB12     |  | LB12     |  |  |                 |
| 6        |          | 63       | 200               | ✓ 200                | x                                  |     | x     |       |                            |      |     |    |       | 2020-005 |  | 2020-005 |  |  |                 |
| 7        |          | 64       | 175               |                      |                                    |     | x     |       |                            |      |     |    |       | 300 m    |  | 300 m    |  |  |                 |
| 8        |          | 65       | 150               |                      |                                    | xx  |       | x     |                            |      |     |    |       | bot 3    |  | bot 3    |  |  |                 |
| 9        |          | 66       | 125               |                      |                                    | x   |       | xx    |                            |      |     |    |       |          |  |          |  |  |                 |
| 10       |          | 67       | 100               |                      |                                    | x   |       | x     |                            |      |     |    |       |          |  |          |  |  |                 |
| 11       |          | 68       | 75                |                      |                                    | x   |       | x     |                            |      |     |    |       |          |  |          |  |  |                 |
| 12       |          | 69       | 50                |                      |                                    | x   |       | x     |                            | x    |     |    |       |          |  |          |  |  |                 |
| 13       |          | 70       | 30                |                      |                                    | xx  |       | x     |                            | xx   |     |    |       |          |  |          |  |  |                 |
| 14       |          | 71       | 20                |                      |                                    | x   |       | x     |                            | x    |     | xx |       |          |  |          |  |  |                 |
| 15       |          | 72       | 10                |                      |                                    | x   |       | x     |                            | x    |     | xx |       |          |  |          |  |  |                 |
| 16       |          | 73       | 5                 |                      |                                    | x   |       | x     |                            | x    | xx  | xx | x     | xxx      |  |          |  |  |                 |
| 17       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 18       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 19       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 20       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 21       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 22       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 23       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |
| 24       |          |          |                   |                      |                                    |     |       |       |                            |      |     |    |       |          |  |          |  |  |                 |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth: 482 m

Transmisso Cleaned: Y/N

Time UTC Local

Start 1618 0918

Bottom 1625

End 1652

Positional Information

Start Lat: 48° 13.120 N

Lon: 125° 51.600 W

Bottom Lat: 48° 13.120 N

Lon: 125° 51.610 W

End Lat: 48° 13.070 N

Lon: 125° 51.500 W

Extra comments:

## Water Properties Group

**Program**  
**STN List:** La\_Perouse

## Sampling Log

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

Cruise ID: 2020-005

Station: LB13

Event #: 31

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 23 | 06 | 2020

| Niskin # |  | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Custom Samples |  |  |  |  |  |  |  |           |  | Comments |
|----------|--|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|------------------------------|--|--|--|--|--|--|--|-----------|--|----------|
|          |  |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC |                              |  |  |  |  |  |  |  |           |  |          |
| 1        |  | 1        | 74       | 5                 | ✓ 5.5              |                                    | x     | X   | xx  | xx   |                              |  |  |  |  |  |  |  |           |  |          |
| 2        |  |          | 5031     | LOOP              |                    |                                    |       | X   | XX  |      |                              |  |  |  |  |  |  |  | Fluor < 1 |  |          |
| 3        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 4        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 5        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 6        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 7        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 8        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 9        |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 10       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 11       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 12       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 13       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 14       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 15       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 16       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 17       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 18       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 19       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 20       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 21       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 22       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 23       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |
| 24       |  |          |          |                   |                    |                                    |       |     |     |      |                              |  |  |  |  |  |  |  |           |  |          |

Version: 28May2020

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

Profile type: ROS TRM X-Niskin other?

Watchkeeper(s): HS

Bottom Depth: 908.7 m  
Transmisso Cleaned: (Y) / N

| <i>Time</i>   | <i>UTC</i> | <i>Local</i> |
|---------------|------------|--------------|
| <b>Start</b>  | 21:35      | 14:39        |
| <b>Bottom</b> | 21:52      |              |
| <b>End</b>    | 22:09      |              |

**Positional Information**

|      |              |   |
|------|--------------|---|
| Lat: | 48 ° 10.610  | N |
| Lon: | 125 ° 56.140 | W |

|        |                     |
|--------|---------------------|
| Bottom | Lat: 48 ° 10.620 N  |
|        | Lon: 125 ° 56.180 W |

|     |                   |   |
|-----|-------------------|---|
| End | Lat: 48 ° 10.600  | N |
|     | Lon: 125 ° 56.160 | W |

**Extra comments:**  
[REDACTED]  
Loop 2xCH 1xSal

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |       |     |  |  | Comments     |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|-------|-----|--|--|--------------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Phyto | DIC |  |  |              |
| 1        | 1        | 75       | Bot-10            | ✓ 1149             | x                                  | x     | x     |     |                            |      |     |    |       |     |  |  |              |
| 2        | 2        | 76       | 1000              | ✓ 1000             | x                                  | xx    | xx    | x   |                            |      |     |    |       |     |  |  |              |
| 3        | 3        | 77       | 750               | ✓ 749              | xx                                 | x     | x     | xx  |                            |      |     |    |       |     |  |  |              |
| 4        | 4        | 78       | 500               | ✓ 500              | x                                  | x     | x     | x   |                            |      |     |    |       |     |  |  |              |
| 5        | 5        | 79       | 400               | ✓ 400              | x                                  | x     | x     | x   |                            |      | xx  |    |       |     |  |  | ammonia LNSW |
| 6        | 6        | 80       | 300               | ✓ 300              | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 7        | 7        | 81       | 250               | ✓ 250              | x                                  | x     |       |     |                            |      | xx  |    |       |     |  |  | ammonia LNSW |
| 8        | 8        | 82       | 200               | ✓ 200              | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 9        | 9        | 83       | 175               | ✓ 175              | xx                                 | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 10       | 10       | 84       | 150               | ✓ 149              | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 11       | 11       | 85       | 125               | ✓ 125              | x                                  | xx    |       |     |                            |      |     |    |       |     |  |  |              |
| 12       | 12       | 86       | 100               | ✓ 100              | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 13       | 13       | 87       | 75                | ✓ 76               | xx                                 | x     |       |     |                            |      |     |    |       |     |  |  |              |
| 14       | 14       | 88       | 50                | ✓ 50               | x                                  | x     |       |     | x                          |      |     |    |       |     |  |  |              |
| 15       | 15       | 89       | 30                | ✓ 30               | x                                  | x     |       |     | xx                         |      |     |    |       |     |  |  |              |
| 16       | 16       | 90       | 20                | ✓ 20               | x                                  | x     |       |     | x                          |      | xx  |    |       |     |  |  |              |
| 17       | 17       | 91       | 10                | ✓ 10               | x                                  | x     |       |     | x                          |      | xx  |    |       |     |  |  |              |
| 18       | 18       | 92       | 5                 | ✓ 5                | x                                  | x     |       | x   | x                          | xx   | xx  |    |       |     |  |  | Fluo : 3.3   |
| 19       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |
| 20       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |
| 21       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |
| 22       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |
| 23       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |
| 24       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |              |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s):

Bottom Depth: 1168 m

Transmisso Cleaned: Y1 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2249 | 1549  |
| Bottom | 2309 |       |
| End    | 2348 |       |

Positional Information

Start

Lat: 48 ° 08.670 N

Lon: 125 ° 59.881 W

Bottom

Lat: 48 ° 08.720 N

Lon: 125 ° 59.890 W

End

Lat: 48 ° 08.730 N

Lon: 125 ° 59.840 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |     |  |  |  | Comments  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|-----|--|--|--|-----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto | DIC |  |  |  |           |
| 1        | 1        | 93       | 5                 | ✓                    |                                    | x     |       |     | xx  | xx                         |     |    |       |     |  |  |  | Fluo: 5.7 |
| 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): GC

Bottom Depth: 1567 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0108 | 1808  |
| Bottom | 0136 |       |
| End    | 0205 |       |

Positional Information

StartLat: 48 ° 04.480 N

StartLon: 126 ° 08.500 W

BottomLat: 48 ° 04.470 N

BottomLon: 126 ° 08.500 W

EndLat: 48 ° 04.490 N

EndLon: 126 ° 08.450 W

Extra comments:

# Water Properties Group

Program  
STN List:

La Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LB16

Event #:

38

Ship:

JP Tully

UTC Date (dd/mmm/yyyy): 24/06/2020

| Niskin # |  | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     |     |      |     |    |       |     | Sample Lists: Core_Samples |           |  |  | Comments |  |  |  |
|----------|--|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|-----|------|-----|----|-------|-----|----------------------------|-----------|--|--|----------|--|--|--|
|          |  |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | DA | Phyto | DIC |                            |           |  |  |          |  |  |  |
| 1        |  | 1        | 94       | 1600              | ✓ 1600             |                                    |       |       | x   |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 2        |  | 2        | 95       | 1500              | ✓ 1500             |                                    |       |       | x   |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 3        |  | 3        | 96       | 1000              | ✓ 1000             |                                    |       |       | x   |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 4        |  | 4        | 97       | 5                 | ✓ 5                |                                    | x     |       | x   | xx  | xx   |     |    |       |     |                            |           |  |  |          |  |  |  |
| 5        |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            | Fluo 0.45 |  |  |          |  |  |  |
| 6        |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 7        |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 8        |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 9        |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 10       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 11       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 12       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 13       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 14       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 15       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 16       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 17       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 18       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 19       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 20       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 21       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 22       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 23       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |
| 24       |  |          |          |                   |                    |                                    |       |       |     |     |      |     |    |       |     |                            |           |  |  |          |  |  |  |

Version: 28May2020

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

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

Bottom Depth: 1804 m  
 Transmisso Cleaned: ① N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0336 | 2036  |
| Bottom | 0406 |       |
| End    | 0439 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 48 ° 00.780 N  |
|        | Lon: 126 ° 16.840 W |
| Bottom | Lat: 48 ° 00.780 N  |
|        | Lon: 126 ° 16.840 W |
| End    | Lat: 48 ° 00.780 N  |
|        | Lon: 126 ° 16.840 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |       |     |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|-------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Phyto | DIC |  |  |          |
| 1        |          | 98       | Bot-10            | ✓ 1469             | x                                  | x     | x     |     |                            |      |     |    |       |     |  |  |          |
| 2        |          | 99       | 1250              | ✓                  | x                                  | x     | x     | x   |                            |      |     |    |       |     |  |  |          |
| 3        |          | 100      | 1000              | ✓ 1001             | x                                  | x     | x     | xx  |                            |      |     |    |       |     |  |  |          |
| 4        |          | 101      | 750               | ✓                  | xx                                 | x     | x     | x   |                            |      |     |    |       |     |  |  |          |
| 5        |          | 102      | 500               | ✓                  | x                                  | xx    | xx    |     |                            |      |     |    |       |     |  |  |          |
| 6        |          | 103      | 400               | ✓                  | x                                  | x     | x     |     |                            |      |     |    |       |     |  |  |          |
| 7        |          | 104      | 300               | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 8        |          | 105      | 250               | ✓                  | xx                                 | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 9        |          | 106      | 200               | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 10       |          | 107      | 175               | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 11       |          | 108      | 150               | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 12       |          | 109      | 125               | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 13       |          | 110      | 100               | ✓                  | x                                  | xx    |       |     |                            |      |     |    |       |     |  |  |          |
| 14       |          | 111      | 75                | ✓                  | x                                  | x     |       |     |                            |      |     |    |       |     |  |  |          |
| 15       |          | 112      | 50                | ✓                  | xx                                 | x     |       |     | x                          |      |     |    |       |     |  |  |          |
| 16       |          | 113      | 30                | ✓                  | x                                  | x     |       |     | x                          |      |     |    |       |     |  |  |          |
| 17       |          | 114      | 20                | ✓                  | x                                  | x     |       |     | x                          |      | xx  |    |       |     |  |  |          |
| 18       |          | 115      | 10                | ✓                  | x                                  | x     |       |     | x                          |      | xx  |    |       |     |  |  |          |
| 19       |          | 116      | 5                 | ✓                  | x                                  | x     |       | x   | xx                         | xx   | xx  |    |       |     |  |  |          |
| 20       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 21       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 22       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 23       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 24       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |

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

Watchkeeper(s): SR

Bottom Depth: 1464 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1619 | 0919  |
| Bottom | 1643 |       |
| End    | 1728 |       |

Positional Information

Start

Lat: 48 ° 18.920 N

Lon: 126 ° 26.670 W

Bottom

Lat: 48 ° 18.920 N

Lon: 126 ° 26.650 W

End

Lat: 48 ° 18.910 N

Lon: 126 ° 26.630 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LC09

Event #:

46

Ship:

JP Tully

UTC Date (dd/mmm/yyyy):

24 | 06 | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |        |     |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|--------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Lugols | DIC |  |  |          |
| 1        | 1        | 117      | Bot-10            | ✓ 604              | x                                  | xx    | xx    |     |                            |      |     |    |        | x   |  |  |          |
| 2        | 2        | 118      | 500               | ✓ 500              | xx                                 | x     | x     | x   |                            |      |     |    |        | xx  |  |  |          |
| 3        | 3        | 119      | 400               | ✓ 400              | x                                  | x     | x     | x   |                            |      |     |    |        | x   |  |  |          |
| 4        | 4        | 120      | 300               | ✓ 300              | x                                  | x     |       |     |                            |      |     |    |        | x   |  |  |          |
| 5        | 5        | 121      | 250               | ✓ 249              | x                                  | x     |       |     |                            |      |     |    |        | x   |  |  |          |
| 6        | 6        | 122      | 200               | ✓ 200              | x                                  | x     |       |     |                            |      |     |    |        | x   |  |  |          |
| 7        | 4        | 123      | 175               | ✓ 176              | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 8        | 8        | 124      | 150               | ✓ 150              | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 9        | 9        | 125      | 125               | ✓ 125              | x                                  | xx    |       |     |                            |      |     |    |        |     |  |  |          |
| 10       | 10       | 126      | 100               | ✓ 100              | x                                  | x     |       |     |                            |      |     |    |        | x   |  |  |          |
| 11       | 11       | 127      | 75                | ✓ 74               | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 12       | 12       | 128      | 50                | ✓ 50               | x                                  | x     |       |     | x                          |      |     |    |        | xx  |  |  |          |
| 13       | 13       | 129      | 30                | ✓ 31               | x                                  | x     |       |     | xx                         |      |     |    |        | x   |  |  |          |
| 14       | 14       | 130      | 20                | ✓ 20               | x                                  | x     |       |     | x                          |      | xx  |    |        |     |  |  |          |
| 15       | 15       | 131      | 10                | ✓ 10               | x                                  | x     |       |     | x                          |      | xx  |    |        | x   |  |  |          |
| 16       | 16       | 132      | 5                 | ✓ 5                | xx                                 | x     |       |     |                            |      |     |    |        | x   |  |  |          |
| 17       | 17       | 133      | 5                 | ✓ 5                |                                    | x     |       |     | x                          | xx   | xx  | x  | x      |     |  |  |          |
| 18       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 19       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 20       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 21       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 22       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 23       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 24       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

GC

Bottom Depth: 617 m

Transmisso Cleaned: 601 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2028 | 1328  |
| Bottom | 2040 |       |
| End    | 2105 |       |

Positional Information

|      |       |          |
|------|-------|----------|
| Lat: | 48 °  | 25.888 N |
| Lon: | 126 ° | 13.688 W |

|      |       |          |
|------|-------|----------|
| Lat: | 48 °  | 25.886 N |
| Lon: | 126 ° | 13.669 W |

|      |       |          |
|------|-------|----------|
| Lat: | 48 °  | 25.870 N |
| Lon: | 126 ° | 13.637 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core Samples |     |    |        |         |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|--------|---------|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Lugols | DIC     |  |  |          |
| 1        | 1        | 134      | Bot-10            | ✓ 191                | x                                  | x     |       |     |     |                            |     |    |        | x       |  |  |          |
| 2        | 2        | 135      | 175               | ✓ 175                | x                                  | x     |       |     |     |                            |     |    |        |         |  |  |          |
| 3        | 3        | 136      | 150               | ✓ 151                | x                                  | x     |       |     |     |                            |     |    |        |         |  |  |          |
| 4        | 4        | 137      | 125               | ✓ 125                | x                                  | x     |       |     |     |                            |     |    |        |         |  |  |          |
| 5        | 5        | 138      | 100               | ✓ 99                 | x                                  | x     |       |     |     |                            |     |    |        | xx      |  |  |          |
| 6        | 6        | 139      | 75                | ✓ 74                 | xx                                 | x     |       |     |     |                            |     |    |        |         |  |  |          |
| 7        | 7        | 140      | 50                | ✓ 50                 | x                                  | x     |       |     | x   |                            |     |    |        | x       |  |  |          |
| 8        | 8        | 141      | 30                | ✓ 31                 | x                                  | x     |       |     | x   |                            |     |    |        | x       |  |  |          |
| 9        | 9        | 142      | 20                | ✓ 19                 | x                                  | x     |       |     | xx  |                            | xx  |    |        | x       |  |  |          |
| 10       | 10       | 143      | 10                | ✓ 10                 | x                                  | xx    |       |     | x   |                            | xx  |    |        | xx      |  |  |          |
| 11       | 11       | 144      | 5                 | ✓ 5                  | x                                  | x     |       |     | x   | xx                         | xx  |    |        | x       |  |  |          |
| 12       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 13       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 14       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        | 1x Hgce |  |  |          |
| 15       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 16       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |         |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): GC

Bottom Depth: 201 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0056 | 1756  |
| Bottom | 0100 |       |
| End    | 0115 |       |

Positional Information

Start

Lat: 48 ° 29.440 N

Lon: 126 ° 07.100 W

Bottom

Lat: 48 ° 29.450 N

Lon: 126 ° 07.110 W

End

Lat: 48 ° 29.440 N

Lon: 126 ° 07.140 W

Extra comments:

Cruise ID: 2020-005

Station: LC06

Event #: 53

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 25|06|2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |        |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|--------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Lugols | DIC |  |  |          |
| 1        | 1        | 145      | Bot-10            | ✓ 82                 | xx                                 | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 2        | 2        | 146      | 75                | ✓ 74                 | x                                  | xx    |       |     |                            |      |     |    |        |     |  |  |          |
| 3        | 3        | 147      | 50                | ✓ 49                 | x                                  | x     |       |     | x                          |      |     |    |        |     |  |  |          |
| 4        | 4        | 148      | 30                | ✓ 31                 | x                                  | x     |       |     | x                          |      |     |    |        |     |  |  |          |
| 5        | 5        | 149      | 20                | ✓ 20                 | x                                  | x     |       |     | x                          |      | xx  |    |        |     |  |  |          |
| 6        | 6        | 150      | 10                | ✓ 10                 | x                                  | x     |       |     | xx                         |      | xx  |    |        |     |  |  |          |
| 7        | 7        | 151      | 5                 | ✓ 5                  | x                                  | x     |       |     | 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): GC

Bottom Depth: 93 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0321 | 2021  |
| Bottom | 0324 |       |
| End    | 0333 |       |

Positional Information

Start

Lat: 48 ° 36.390 N

Lon: 125 ° 53.820 W

Bottom

Lat: 48 ° 36.390 N

Lon: 125 ° 53.800 W

End

Lat: 48 ° 36.380 N

Lon: 125 ° 53.810 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |        |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|--------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Lugols | DIC |  |  |          |
| 1        | 1        | 152      | Bot-10            | ✓ 156                | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 2        | 2        | 153      | 150               | ✓ 150                | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 3        | 3        | 154      | 125               | ✓ 126                | xx                                 | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 4        | 4        | 155      | 100               | ✓ 100                | x                                  | x     |       |     |                            |      |     |    |        |     |  |  |          |
| 5        | 5        | 156      | 75                | ✓ 75                 | x                                  | xx    |       |     |                            |      |     |    |        |     |  |  |          |
| 6        | 6        | 157      | 50                | ✓ 50                 | x                                  | x     |       |     | x                          |      |     |    |        |     |  |  |          |
| 7        | 7        | 158      | 30                | ✓ 31                 | x                                  | x     |       |     | xx                         |      |     |    |        |     |  |  |          |
| 8        | 8        | 159      | 20                | ✓ 21                 | x                                  | x     |       |     | x                          |      | xx  |    |        |     |  |  |          |
| 9        | 9        | 160      | 10                | ✓ 10                 | x                                  | x     |       |     | x                          |      | xx  |    |        |     |  |  |          |
| 10       | 10       | 161      | 5                 | ✓ 5                  | x                                  | x     |       |     | x                          | xx   | xx  |    |        |     |  |  |          |
| 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: 166 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0529 | 2259  |
| Bottom | 0533 |       |
| End    | 0547 |       |

Positional Information

Start

Lat: 48 ° 43.390 N

Lon: 125 ° 40.670 W

Bottom

Lat: 48 ° 43.370 N

Lon: 125 ° 40.670 W

End

Lat: 48 ° 43.390 N

Lon: 125 ° 40.560 W

Extra comments:

Loop

Loop 2xCHL, 1 Sal

5056 Sample#

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |        |                     | Comments |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|--------|---------------------|----------|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Lugols | DIC                 |          |  |  |
| 1        |          | 162      | Bot-10            | ✓ 150                | x                                  | x     |       |     |     |                            |     |    |        | x                   |          |  |  |
| 2        |          | 163      | 75                | ✓                    | x                                  | x     |       |     |     |                            |     |    |        | x                   |          |  |  |
| 3        |          | 164      | 50                | ✓                    | xx                                 | x     |       |     | x   |                            |     |    |        | xx                  |          |  |  |
| 4        |          | 165      | 30                | ✓                    | x                                  | x     |       |     | x   |                            |     |    |        | x                   |          |  |  |
| 5        |          | 166      | 20                | ✓                    | x                                  | xx    |       |     | x   |                            | xx  |    |        | xx                  |          |  |  |
| 6        |          | 167      | 10                | ✓                    | x                                  | x     |       |     | xx  |                            | xx  |    |        | x                   |          |  |  |
| 7        |          | 168      | 5                 | ✓                    | x                                  | x     |       |     |     |                            |     |    |        | x                   |          |  |  |
| 8        |          | 169      | 5                 | ✓                    |                                    | x     |       |     | x   | xx                         | xx  | x  | x      |                     |          |  |  |
| 9        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 10       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        | 2x H <sub>2</sub> O |          |  |  |
| 11       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 12       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 13       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 14       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 15       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 16       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 17       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 18       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 19       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |                     |          |  |  |

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

Watchkeeper(s): SR

Bottom Depth: 111 m

Transmisso Cleaned: 61 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0715 | 0015  |
| Bottom | 0716 |       |
| End    |      |       |

Positional Information

Start  
Lat: 48 ° 48.730 N  
Lon: 125 ° 30.900 W

Bottom  
Lat: 48 ° 48.730 N  
Lon: 125 ° 30.880 W

End  
Lat: 48 ° 48.730 N  
Lon: 125 ° 30.830 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |        |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|--------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Lugols |  |  |  |  |          |
| 1        |          | 170      | Bot-10            | ✓ 88                 | x                                  | x     |       |     |     |                            |     |    |        |  |  |  |  |          |
| 2        |          | 171      | 75                | ✓                    | x                                  | xx    |       |     |     |                            |     |    |        |  |  |  |  |          |
| 3        |          | 172      | 50                | ✓                    | xx                                 | x     |       |     | x   |                            |     |    |        |  |  |  |  |          |
| 4        |          | 173      | 30                | ✓                    | x                                  | x     |       |     | x   |                            |     |    |        |  |  |  |  |          |
| 5        |          | 174      | 20                | ✓                    | x                                  | x     |       |     | x   |                            | xx  |    |        |  |  |  |  |          |
| 6        |          | 175      | 10                | ✓                    | x                                  | x     |       |     | xx  |                            | xx  |    |        |  |  |  |  |          |
| 7        |          | 176      | 5                 | ✓                    | x                                  | x     |       | x   | x   | xx                         | xx  | x  | x      |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |        |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth: 27 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0801 | 0101  |
| Bottom | 0802 |       |
| End    | 0811 |       |

Positional Information

StartLat: 48 ° 50.440 N  
Lon: 125 ° 27.740 W

BottomLat: 48 ° 50.450 N  
Lon: 125 ° 27.750 W

EndLat: 48 ° 50.450 N  
Lon: 125 ° 27.880 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |          |
| 1        | 1        | 177      | 2000              | ✓ 2000.1           | x                                  |       |     |      |                            |  |  |  |          |
| 2        | 2        | 178      | 1500              | ✓ 1501.2           | x                                  |       |     |      |                            |  |  |  |          |
| 3        | 3        | 179      | 5                 | ✓ 5.0              | x                                  | x     | xx  | xx   |                            |  |  |  |          |
| 4        |          | 5060     | loop              |                    | x                                  |       | xx  |      |                            |  |  |  |          |
| 5        |          | 5063     |                   |                    |                                    |       |     |      |                            |  |  |  |          |
| 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 GC HS

Bottom Depth: 2432 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2320 | 1620  |
| Bottom | 2356 | 1656  |
| End    | 0035 | 1735  |

Positional Information

Start

Lat: 48° 51.37 N

Lon: 129° 7.90 W

Bottom

Lat: 48° 51.38 N

Lon: 129° 7.98 W

End

Lat: 48° 51.390 N

Lon: 129° 07.990 W

Extra comments:

Loop samples:  
1 sal, 2 chl  
#5063

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        | 1        | 178      | 2000              | ✓ 2001.0             | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 2        | 2        | 179      | 1500              | ✓ 1500.5             | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 3        | 3        | 180      | 5                 | ✓ 5.2                | x                                  | x     | x   | xx   |                            |  |  |  |  |  |  |  |          |
| 4        |          | 5064     | loop              |                      | x                                  |       | xx  |      |                            |  |  |  |  |  |  |  |          |
| 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): KS GC HS

Bottom Depth: 2670 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 02:51 | 19:51 |
| Bottom | 03:27 | 20:27 |
| End    | 04:05 | 21:05 |

Positional Information

Start

Lat: 48 ° 53.55 N

Lon: 129 ° 39.89 W

Bottom

Lat: 48 ° 53.51 N

Lon: 129 ° 40.07 W

End

Lat: 48 ° 53.34 N

Lon: 129 ° 40.20 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                         | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|-------------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed<br>✓ Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        | 1        | 181      | 2000              | ✓ 2000                  | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 2        | 2        | 182      | 1500              | ✓ 1500                  | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 3        | 3        | 183      | 5                 | ✓                       |                                    | x     | x   | xx   |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                         |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s):

GC

Bottom Depth:

2781

m

Transmisso Cleaned:

Y

N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0603 | 2303  |
| Bottom | 0638 |       |
| End    | 0715 |       |

Positional Information

Start

Lat:

48 ° 56.010

N

Lon:

130 ° 09.920

W

Bottom

Lat:

48 ° 55.901

N

Lon:

130 ° 09.924

W

End

Lat:

48 ° 55.793

N

Lon:

130 ° 10.068

W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: All_Samples |      |     |  | Comments |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|---------------------------|------|-----|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                       | HPLC | DIC |  |          |  |  |  |
| 1        |          | 184      | Bot-10            | ✓ 3275             | x                                  | x     | x     |     |                           |      | x   |  |          |  |  |  |
| 2        |          | 185      | 3000              | ✓ 3000             | xx                                 | xx    | xx    | xx  |                           |      | xx  |  |          |  |  |  |
| 3        |          | 186      | 2500              | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 4        |          | 187      | 2000              | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 5        |          | 188      | 1500              | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 6        |          | 189      | 1250              | ✓                  | xx                                 | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 7        |          | 190      | 1000              | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 8        |          | 191      | 800               | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 9        |          | 192      | 600               | ✓                  | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 10       |          | 193      | 400               | ✓ 476              | x                                  | x     | x     | x   |                           |      | x   |  |          |  |  |  |
| 11       |          | 194      | 300               | ✓ 400              | x                                  | x     |       | x   |                           |      | x   |  |          |  |  |  |
| 12       |          | 195      | 250               | ✓ 300              | xx                                 | x     |       | x   |                           |      | x   |  |          |  |  |  |
| 13       |          | 196      | 200               | ✓ 250              | x                                  | x     |       | x   |                           |      | x   |  |          |  |  |  |
| 14       |          | 197      | 150               | ✓ 200              | x                                  | x     |       | x   |                           |      | x   |  |          |  |  |  |
| 15       |          | 198      | 100               | ✓ 150              | x                                  | x     |       | x   | x                         |      | x   |  |          |  |  |  |
| 16       |          | 199      | 75                | ✓ 100              | x                                  | x     |       | x   | x                         |      | x   |  |          |  |  |  |
| 17       |          | 200      | 60                | ✓ 74               | x                                  | x     |       | x   | x                         | xx   |     |  |          |  |  |  |
| 18       |          | 201      | 50                | ✓ 60               | xx                                 | x     |       | x   | xx                        | xx   | x   |  |          |  |  |  |
| 19       |          | 202      | 40                | ✓ 50               | x                                  | x     |       | x   | x                         | xx   |     |  |          |  |  |  |
| 20       |          | 203      | 30                | ✓ 40               | x                                  | x     |       | x   | x                         | xx   |     |  |          |  |  |  |
| 21       |          | 204      | 25                | ✓ 30               | x                                  | x     |       | x   | xx                        |      | x   |  |          |  |  |  |
| 22       |          | 205      | 15                | ✓ 25               | x                                  | xx    |       | x   | x                         | xx   |     |  |          |  |  |  |
| 23       |          | 206      | 10                | ✓ 15               | x                                  | x     |       | x   | x                         |      | x   |  |          |  |  |  |
| 24       |          | 207      | 5                 | ✓ 10               | x                                  | x     |       | x   | x                         | xx   | x   |  |          |  |  |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth: 3261 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1659 | 0959  |
| Bottom | 1745 |       |
| End    | 1905 |       |

Positional Information

Start

Lat: 48° 58.250 N

Lon: 130° 39.940 W

Bottom

Lat: 48° 58.250 N

Lon: 130° 39.910 W

End

Lat: 48° 58.231 N

Lon: 130° 39.835 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                      |  |  |  |  |  |  |  |          |
| 1        | 1        | 209      | 2000              | ✓ 2000               | x                                  | x     | x     | xx  |     |                           |  |  |  |  |  |  |  |          |
| 2        | 2        | 210      | 1500              | ✓ 1500               | x                                  | x     | x     | x   |     |                           |  |  |  |  |  |  |  |          |
| 3        | 3        | 211      | 1250              | ✓ 1250               | xx                                 | x     | x     | x   |     |                           |  |  |  |  |  |  |  |          |
| 4        | 4        | 212      | 1000              | ✓ 1000               | x                                  | x     | x     | x   |     |                           |  |  |  |  |  |  |  |          |
| 5        | 5        | 213      | 800               | ✓ 800                | x                                  | xx    | xx    | x   |     |                           |  |  |  |  |  |  |  |          |
| 6        | 6        | 214      | 600               | ✓ 600                | x                                  | x     | x     |     |     |                           |  |  |  |  |  |  |  |          |
| 7        | 7        | 215      | 400               | ✓ 400                | x                                  | x     | x     |     |     |                           |  |  |  |  |  |  |  |          |
| 8        | 8        | 216      | 300               | ✓ 300                | xx                                 | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 9        | 9        | 217      | 250               | ✓ 250                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 10       | 10       | 218      | 200               | ✓ 200                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 11       | 11       | 219      | 175               | ✓ 175                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 12       | 12       | 220      | 150               | ✓ 150                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 13       | 13       | 221      | 125               | ✓ 125                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 14       | 14       | 222      | 100               | ✓ 100                | x                                  | x     |       |     |     |                           |  |  |  |  |  |  |  |          |
| 15       | 15       | 223      | 75                | ✓ 75                 | xx                                 | x     |       |     | x   |                           |  |  |  |  |  |  |  |          |
| 16       | 16       | 224      | 60                | ✓ 60                 | x                                  | xx    |       |     | x   | xx                        |  |  |  |  |  |  |  |          |
| 17       | 17       | 225      | 50                | ✓ 50                 | x                                  | x     |       |     | x   | xx                        |  |  |  |  |  |  |  |          |
| 18       | 18       | 226      | 40                | ✓ 40                 | x                                  | x     |       |     | x   | xx                        |  |  |  |  |  |  |  |          |
| 19       | 19       | 227      | 30                | ✓ 30                 | x                                  | x     |       |     | x   | xx                        |  |  |  |  |  |  |  |          |
| 20       | 20       | 228      | 25                | ✓ 25                 | x                                  | x     |       |     | xx  |                           |  |  |  |  |  |  |  |          |
| 21       | 21       | 229      | 15                | ✓ 15                 | xx                                 | x     |       |     | x   | xx                        |  |  |  |  |  |  |  |          |
| 22       | 22       | 230      | 10                | ✓ 10                 | x                                  | x     |       |     | xx  |                           |  |  |  |  |  |  |  |          |
| 23       | 22       | 231      | 5                 | ✓ 5                  | x                                  | x     |       | x   | x   | xx                        |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                           |  |  |  |  |  |  |  |          |

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

Watchkeeper(s): GC

Bottom Depth: 2545 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0455 | 2155  |
| Bottom | 0530 |       |
| End    | 0630 |       |

Positional Information

Start

Lat: 48 ° 48.952 N

Lon: 128 ° 39.937 W

Bottom

Lat: 48 ° 48.953 N

Lon: 128 ° 39.937 W

End

Lat: 48 ° 48.950 N

Lon: 128 ° 39.940 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        |          | 232      | 2000              | ✓                    | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 4        |          | 233      | 1500              | ✓                    | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 5        |          | 234      | 5                 | ✓                    |                                    | x     | xx  | xx   |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): 

SR

Bottom Depth: 

2530

 m

Transmisso Cleaned: 

Y

 / 

N

| Time   | UTC             | Local           |
|--------|-----------------|-----------------|
| Start  | <div>0844</div> | <div>0144</div> |
| Bottom | <div>0916</div> |                 |
| End    | <div>0950</div> |                 |

Positional Information

Lat: 

48 ° 46.680

 N

Lon: 

128 ° 9.810

 W

▼

Lat: 

48 ° 46.680

 N

Lon: 

128 ° 9.810

 W

▼

Lat: 

48 ° 46.840

 N

Lon: 

128 ° 9.860

 W

Extra comments:

Cruise ID:

2020-005

Station:

P6

Event #:

77

Ship:

JP Tully

UTC Date (dd|mmm|yyyy):

27 June 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        |          | 235      | 2000              | ✓                    | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 2        |          | 236      | 1500              | ✓                    | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 3        |          | 237      | 5                 | ✓                    |                                    | x     | x   | xx   |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s):  
SR

Bottom Depth: 2573 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 1205 0505

Bottom 1233

End 1304

Positional Information

Lat: 48 ° 44.600 N

Lon: 127 ° 39.980 W

▼

Lat: 48 ° 44.570 N

Lon: 127 ° 40.180 W

▼

Lat: 48 ° 44.620 N

Lon: 127 ° 40.300 W

Start

Bottom

End

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |      | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|------|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Sal                                | Nut-F | CHL | HPLC |                            |  |  |  |  |  |  |  |          |
| 1        |          | 238      | 2000              | ✓ 2000               | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 2        |          | 239      | 1500              | ✓ 1500               | x                                  |       |     |      |                            |  |  |  |  |  |  |  |          |
| 3        |          | 240      | 5                 | ✓ 5.1                |                                    | x     | x   | xx   |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |     |      |                            |  |  |  |  |  |  |  |          |

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

Watchkeeper(s): MC

Bottom Depth: 2113 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1522 |       |
| Bottom | 1551 |       |
| End    | 1623 |       |

Positional Information

Start

Lat: 48 ° 41.26 N

Lon: 127 ° 09.93 W

Bottom

Lat: 48 ° 41.27 N

Lon: 127 ° 10.06 W

End

Lat: 48 ° 41.26 N

Lon: 127 ° 10.08 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |             |          | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: All_Samples |       |     |  |  |  |  | Comments |
|----------|----------|----------|-------------------|-------------|----------|------------------------------------|-------|-------|-----|-----|---------------------------|-------|-----|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ | Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                      | Phyto | DIC |  |  |  |  |          |
| 1        | 1        | 241      | Bot-10            | ✓           | 1315     | x                                  | x     | x     |     |     |                           |       | x   |  |  |  |  |          |
| 2        | 2        | 242      | 1250              | ✓           | 1250     | x                                  | x     | x     | x   |     |                           |       | xx  |  |  |  |  |          |
| 3        | 3        | 243      | 1000              | ✓           | 1000     | xx                                 | x     | x     | x   |     |                           |       | x   |  |  |  |  |          |
| 4        | 4        | 244      | 800               | ✓           | 800      | x                                  | x     | x     | x   |     |                           |       | x   |  |  |  |  |          |
| 5        | 5        | 245      | 600               | ✓           | 600      | x                                  | xx    | xx    | x   |     |                           |       | x   |  |  |  |  |          |
| 6        | 6        | 246      | 400               | ✓           | 400      | x                                  | x     | x     |     |     |                           |       | x   |  |  |  |  |          |
| 7        | 7        | 247      | 300               | ✓           | 300      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 8        | 8        | 248      | 250               | ✓           | 250      | xx                                 | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 9        | 9        | 249      | 200               | ✓           | 200      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 10       | 10       | 250      | 175               | ✓           | 175      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 11       | 11       | 251      | 150               | ✓           | 151      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 12       | 12       | 252      | 125               | ✓           | 125      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 13       | 13       | 253      | 100               | ✓           | 100      | x                                  | x     |       |     |     |                           |       | x   |  |  |  |  |          |
| 14       | 14       | 254      | 75                | ✓           | 75       | x                                  | x     |       |     | x   |                           |       | x   |  |  |  |  |          |
| 15       | 15       | 255      | 60                | ✓           | 60       | xx                                 | x     |       |     | x   | xx                        |       |     |  |  |  |  |          |
| 16       | 16       | 256      | 50                | ✓           | 50       | x                                  | xx    |       |     | x   | xx                        |       | x   |  |  |  |  |          |
| 17       | 17       | 257      | 40                | ✓           | 40       | x                                  | x     |       |     | x   | xx                        |       |     |  |  |  |  |          |
| 18       | 18       | 258      | 30                | ✓           | 30       | x                                  | x     |       |     | x   | xx                        |       |     |  |  |  |  |          |
| 19       | 19       | 259      | 25                | ✓           | 25       | x                                  | x     |       |     | xx  |                           |       | x   |  |  |  |  |          |
| 20       | 20       | 260      | 15                | ✓           | 15       | x                                  | x     |       |     | xx  | xx                        |       |     |  |  |  |  |          |
| 21       | 21       | 261      | 10                | ✓           | 10       | xx                                 | x     |       |     | x   |                           |       | x   |  |  |  |  |          |
| 22       | 22       | 262      | 5                 | ✓           | 5        | x                                  | x     |       | x   |     |                           |       | x   |  |  |  |  |          |
| 23       | 23       | 263      | 5                 | ✓           | 5        |                                    | x     |       |     | x   | xx                        | xxx   |     |  |  |  |  |          |
| 24       |          |          |                   |             |          |                                    |       |       |     |     |                           |       |     |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): GC

Bottom Depth: 1327 m

Transmisso Cleaned: ☒ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 2011  | 13 11 |
| Bottom | 2034  |       |
| End    | 21 19 |       |

Positional Information

Start

Lat: 48 ° 39.100 N

Lon: 126 ° 40.200 W

Bottom

Lat: 48 ° 39.100 N

Lon: 126 ° 40.200 W

End

Lat: 48 ° 39.100 N

Lon: 126 ° 40.200 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |      |     | Sample Lists: All_Samples |  |  |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|------|-----|---------------------------|--|--|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | CHL                                | HPLC | SAL |                           |  |  |  |  |  |  |  |  |  |          |
| 1        | /        | 300      | 5                 | /                  | S                                  | xx   | xx  | x                         |  |  |  |  |  |  |  |  |  |          |
| 2        |          | 5085     | loop              |                    |                                    | xx   |     | x                         |  |  |  |  |  |  |  |  |  |          |
| 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): AC

Bottom Depth: 1610 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0040 | 1740  |
| Bottom | 0051 |       |
| End    | 0101 |       |

Positional Information

Start

Lat: 48 ° 28.734 N

Lon: 126 ° 42.850 W

Bottom

Lat: 48 ° 28.730 N

Lon: 126 ° 42.850 W

End

Lat: 48 ° 28.730 N

Lon: 126 ° 42.850 W

Extra comments:

Blowing ~30 knts  
Buck ~40 knts

3m seas - 4m seas

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core Samples |      |     |    |        |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|--------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Lugols | DIC |  |  |          |
| 1        |          | 301      | Bot-10            | ✓ 32                 | x                                  | x     |       |     | x                          |      |     |    |        |     |  |  |          |
| 2        |          | 302      | 30                | ✓ 30                 | xx                                 | x     |       |     | x                          |      |     |    |        |     |  |  |          |
| 3        |          | 303      | 20                | ✓ 20                 | x                                  | x     |       |     | x                          |      | xx  |    |        |     |  |  |          |
| 4        |          | 304      | 10                | ✓ 10                 | x                                  | xx    |       |     | xx                         |      | xx  |    |        |     |  |  |          |
| 5        |          | 305      | 5                 | ✓ 5                  | x                                  | x     |       |     | x                          | xx   | xx  | x  | x      |     |  |  |          |
| 6        |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 7        |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 8        |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 9        |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 10       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 11       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 12       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 13       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 14       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 15       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 16       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |        |     |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth: 42 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0920 |       |
| Bottom | 0921 |       |
| End    | 0926 |       |

Positional Information

Start

Lat: 48 ° 58.530 N

Lon: 125 ° 47.240 W

Bottom

Lat: 48 ° 58.530 N

Lon: 125 ° 47.240 W

End

Lat: 48 ° 58.520 N

Lon: 125 ° 47.200 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LD06

Event #:

92

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 28 June 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     |     |      |     |    | Sample Lists: Core Samples |     |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|-----|------|-----|----|----------------------------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | DA | Lugols                     | DIC |  |  |          |
| 1        |          | 306      | Bot-10            | ✓ 128              | x                                  | x     |       |     |     |      |     |    |                            |     |  |  |          |
| 2        |          | 307      | 100               | ✓ 101              | x                                  | xx    |       |     |     |      |     |    |                            |     |  |  |          |
| 3        |          | 308      | 75                | ✓ 76               | x                                  | x     |       |     |     |      |     |    |                            |     |  |  |          |
| 4        |          | 309      | 50                | ✓ 49               | x                                  | x     |       |     | x   |      |     |    |                            |     |  |  |          |
| 5        |          | 310      | 30                | ✓ 30.9             | xx                                 | x     |       |     | x   |      |     |    |                            |     |  |  |          |
| 6        |          | 311      | 20                | ✓ 19.4             | x                                  | x     |       |     | xx  |      | xx  |    |                            |     |  |  |          |
| 7        |          | 312      | 10                | ✓ 10.0             | x                                  | x     |       |     | x   |      | xx  |    |                            |     |  |  |          |
| 8        |          | 313      | 5                 | ✓ 5                | x                                  | x     |       |     | x   | xx   | xx  |    |                            |     |  |  |          |
| 9        |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 10       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 11       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 12       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 13       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 14       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 15       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 16       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 17       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 18       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 19       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 20       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 21       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 22       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 23       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |
| 24       |          |          |                   |                    |                                    |       |       |     |     |      |     |    |                            |     |  |  |          |

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

Bottom Depth: 137 m  
Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1751 | 1051  |
| Bottom | 1754 |       |
| End    | 1805 |       |

Positional Information

|        |                   |                    |
|--------|-------------------|--------------------|
| Start  | Lat: 48° 46.304 N | Lon: 126° 10.202 W |
| Bottom | Lat: 48° 46.316 N | Lon: 126° 10.187 W |
| End    | Lat: 48° 46.345 N | Lon: 126° 10.200 W |

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005

Station: LD04

Event #: 95

Ship: JP Tully

UTC Date (dd mmm/yyyy): 28 JUN 2020

| Niskin # | Firing # | Sample # | Rosette Operation |             |          | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core Samples |     |    |        |     | Comments |
|----------|----------|----------|-------------------|-------------|----------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|--------|-----|----------|
|          |          |          | Target Pressure   | Confirmed ✓ | Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Lugols | DIC |          |
| 1        |          | 314      | Bot-10            | ✓           | 51       | xx                                 | x     |       |     | x   |                            |     |    |        |     |          |
| 2        |          | 315      | 30                | ✓           | 30       | x                                  | x     |       |     | x   |                            |     |    |        |     |          |
| 3        |          | 316      | 20                | ✓           | 20       | x                                  | x     |       |     | xx  |                            | xx  |    |        |     |          |
| 4        |          | 317      | 10                | ✓           | 10       | x                                  | x     |       |     | x   |                            | xx  |    |        |     |          |
| 5        |          | 318      | 5                 | ✓           | 5        | x                                  | xx    |       |     | x   | xx                         | xx  |    |        |     | FLUO 27  |
| 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: 62 m  
Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1948 | 1248  |
| Bottom | 1949 |       |
| End    | 1955 |       |

Positional Information

|        |                  |                   |
|--------|------------------|-------------------|
| Start  | Lat: 48° 53 55 N | Lon: 125° 56 96 W |
| Bottom | Lat: 48° 53 56 N | Lon: 125° 56 90 W |
| End    | Lat: 48° 53 53 N | Lon: 125° 56 92 W |

Extra comments:

Water Properties Group

Program  
STN List: La\_Peouse

Sampling Log

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

Cruise ID: 2020-005

Station: LG02

Event #: 96

Ship: JP Tully

UTC Date (dd mmm/yyyy): 29 06 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto |  |          |
| 1        |          | 324      | Bot-10            | 84                 | x                                  | x     |       |     |     |                            |     |    |       |  |          |
| 2        |          | 325      | 75                | 75                 | x                                  | x     |       |     |     |                            |     |    |       |  |          |
| 3        |          | 326      | 50                | 50                 | x                                  | x     |       |     | x   |                            |     |    |       |  |          |
| 4        |          | 327      | 30                | 30                 | xx                                 | x     |       |     | x   |                            |     |    |       |  |          |
| 5        |          | 328      | 20                | 20                 | x                                  | x     |       |     | xx  |                            | xx  |    |       |  |          |
| 6        |          | 329      | 10                | 10                 | x                                  | xx    |       |     | x   |                            | xx  |    |       |  |          |
| 7        |          | 330      | 5                 | 5                  | x                                  | x     |       |     | x   | xx                         | xx  | x  | xxx   |  |          |
| 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): GR

Bottom Depth: 100 m  
Transmisso Cleaned: 6 / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0313 | 2013  |
| Bottom | 0315 |       |
| End    | 0322 |       |

Positional Information

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 18.600  | N |
| Lon: | 126 ° 37.950 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 18.680  | N |
| Lon: | 126 ° 37.950 | W |

▼

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 18.680  | N |
| Lon: | 126 ° 37.950 | W |

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005

Station: LJ02

Event #: 100

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 29 Jun 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     | Sample Lists: Core_Samples |  |  |  | Comments             |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|----------------------------|--|--|--|----------------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 |                            |  |  |  |                      |
| 1        |          | 331      | 20                | ✓ 19.4               | x                                  | x   |      | xx  |                            |  |  |  | NUT TUBES CRACKED    |
| 2        |          | 332      | 10                | ✓ 9.8                | x                                  | x   |      | xx  |                            |  |  |  | X TOOK NUT FROM CHL  |
| 3        |          | 333      | 5                 | ✓ 4.8                | x                                  | xx  | xx   | xx  |                            |  |  |  | X TOOK NUT FROM HPLC |
| 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): SR

Bottom Depth: 82 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1112 |       |
| Bottom | 1113 |       |
| End    | 1117 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 49 ° 42.648 N  |
|        | Lon: 127 ° 05.221 W |
| Bottom | Lat: 49 ° 42.643 N  |
|        | Lon: 127 ° 05.220 W |
| End    | Lat: 49 ° 42.641 N  |
|        | Lon: 127 ° 05.225 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |      |       |    |       | Sample Lists: All Samples |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|------|-------|----|-------|---------------------------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | CHL                                | HPLC | Nut-F | DA | Lugol |                           |  |  |  |  |          |
| 1        |          | 334      | 0                 | ✓ 1.8              | x                                  | xx   | x     | x  | x     |                           |  |  |  |  |          |
| 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): SR

Bottom Depth: 238 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1330 | 0630  |
| Bottom | 1334 |       |
| End    | 1338 |       |

Positional Information

Start

Lat: 49 ° 52.122 N

Lon: 126 ° 50.849 W

Bottom

Lat: 49 ° 52.117 N

Lon: 126 ° 50.846 W

End

Lat: 49 ° 52.120 N

Lon: 126 ° 50.840 W

Extra comments:

Loop 5010

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |      |       |    |       | Sample Lists: All_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|------|-------|----|-------|---------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | CHL                                | HPLC | Nut-F | DA | Lugol |                           |  |  |  |  |  |  |  |          |
| 1        |          | 335      | 0                 | ✓ 1.8                                                  | x                                  | xx   | x     | x  | x     |                           |  |  |  |  |  |  |  |          |
| 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): SR

Bottom Depth: 230 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1625 | 0925  |
| Bottom | 1629 |       |
| End    | 1633 |       |

Positional Information

Start

Lat: 49 ° 51.810 N

Lon: 126 ° 44.600 W

Bottom

Lat: 49 ° 51.820 N

Lon: 126 ° 44.610 W

End

Lat: 49 ° 51.820 N

Lon: 126 ° 44.610 W

Extra comments:

Loop 5010

Cruise ID: 2020-005

Station: Conception

Event #: 115

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 29 | JUN | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |      |       |    |       | Sample Lists: All_Samples |  |  |  |  | Comments |  |  |  |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|------|-------|----|-------|---------------------------|--|--|--|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | CHL                                | HPLC | Nut-F | DA | Lugol |                           |  |  |  |  |          |  |  |  |
| 1        |          | 336      | 0                 | 2.4                                                    | x                                  | xx   | x     | x  | x     |                           |  |  |  |  |          |  |  |  |
| 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): HR

Bottom Depth: 194 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 23 10 | 16 10 |
| Bottom | 23 14 |       |
| End    | 23 18 |       |

Positional Information

Start

Lat: 49 ° 39.29 N

Lon: 126 ° 27.80 W

Bottom

Lat: 49 ° 39.29 N

Lon: 126 ° 27.80 W

End

Lat: 49 ° 39.28 N

Lon: 126 ° 27.81 W

Extra comments:

Loop 5010

Water Properties Group

Program  
STN List: La\_Peouse

Sampling Log

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

Cruise ID: 2020-005

Station: LBP7

Event #: 123

Ship: JP Tully

UTC Date (dd mmm/yyyy): 01 Jul 2020

| Niskin # |    | Firing # |      | Sample # |      | Rosette Operation |    | Sampler's Initials / Samples Taken |    |     |  |       |  | Sample Lists: Core Samples |  |     |  |     |  | Comments |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
|----------|----|----------|------|----------|------|-------------------|----|------------------------------------|----|-----|--|-------|--|----------------------------|--|-----|--|-----|--|----------|--|-----|--|----|--|-------|--|--|--|--|--|--|--|--|--|
|          |    |          |      |          |      | Target Pressure   |    | Confirmed ✓ Pressure               |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
|          |    |          |      |          |      |                   |    |                                    |    | OXY |  | Nut-F |  | Nut-C                      |  | SAL |  | CHL |  | HPLC     |  | NH4 |  | DA |  | Phyto |  |  |  |  |  |  |  |  |  |
| 1        | 1  | 337      | 2000 | ✓        | 2002 | x                 | x  | x                                  | xx |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 2        | 2  | 338      | 1500 | ✓        | 1500 | x                 | x  | x                                  | x  |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 3        | 3  | 339      | 1250 | ✓        | 1250 | x                 | x  | x                                  | x  |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 4        | 4  | 340      | 1000 | ✓        | 1001 | xx                | x  | x                                  | x  |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 5        | 5  | 341      | 750  | ✓        | 750  | x                 | x  | x                                  |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 6        | 6  | 342      | 500  | ✓        | 499  | x                 | xx | xx                                 |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 7        | 7  | 343      | 400  | ✓        | 399  | x                 | x  | x                                  |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 8        | 8  | 344      | 300  | ✓        | 300  | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 9        | 9  | 345      | 250  | ✓        | 250  | xx                | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 10       | 10 | 346      | 200  | ✓        | 202  | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 11       | 11 | 347      | 175  | ✓        | 175  | x                 | xx |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 12       | 12 | 348      | 150  | ✓        | 150  | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 13       | 13 | 349      | 125  | ✓        | 125  | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 14       | 14 | 350      | 100  | ✓        | 101  | xx                | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 15       | 15 | 351      | 75   | ✓        | 76   | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 16       | 16 | 352      | 50   | ✓        | 51   | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 17       | 17 | 353      | 30   | ✓        | 30   | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 18       | 18 | 354      | 20   | ✓        | 20   | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 19       | 19 | 355      | 10   | ✓        | 10   | xx                | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 20       | 20 | 356      | 5    | ✓        | 5    | x                 | x  |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 21       |    |          |      |          |      |                   |    |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 22       |    |          |      |          |      |                   |    |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 23       |    |          |      |          |      |                   |    |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |
| 24       |    |          |      |          |      |                   |    |                                    |    |     |  |       |  |                            |  |     |  |     |  |          |  |     |  |    |  |       |  |  |  |  |  |  |  |  |  |

Version: 28May2020

Transmissometer to be cleaned before each cast, do not use a brush to clean the sensor.

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

Bottom Depth: 2203 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0007 | 1707  |
| Bottom | 0042 |       |
| End    | 0136 |       |

Positional Information  
Start  
Lat: 49 ° 52.36 N  
Lon: 128 ° 11.20 W

Bottom  
Lat: 49 ° 52.36 N  
Lon: 128 ° 11.20 W

End  
Lat: 49 ° 52.560 N  
Lon: 128 ° 11.200 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     |      |     |       | Sample Lists: Core_Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|------|-----|-------|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | Phyto |                            |  |  |  |          |
| 1        | 1        | 357      | Bot-10            | ✓ 1281               | x                                  | x     | x     |     |     |      |     |       |                            |  |  |  |          |
| 2        | 2        | 358      | 1250              | ✓ 1250               | xx                                 | x     | x     | x   |     |      |     |       |                            |  |  |  |          |
| 3        | 3        | 359      | 1000              | ✓ 1000               | x                                  | x     | x     | x   |     |      |     |       |                            |  |  |  |          |
| 4        | 4        | 360      | 750               | ✓ 752                | x                                  | xx    | xx    | x   |     |      |     |       |                            |  |  |  |          |
| 5        | 5        | 361      | 500               | ✓ 500                | x                                  | x     | x     | x   |     |      |     |       |                            |  |  |  |          |
| 6        | 6        | 362      | 400               | ✓ 400                | xx                                 | x     | x     |     |     |      |     |       |                            |  |  |  |          |
| 7        | 7        | 363      | 300               | ✓ 300                | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 8        | 8        | 364      | 250               | ✓ 250                | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 9        | 9        | 365      | 200               | ✓ 200                | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 10       | 10       | 366      | 175               | ✓ 176                | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 11       | 11       | 367      | 150               | ✓ 150                | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 12       | 12       | 368      | 125               | ✓ 125                | xx                                 | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 13       | 13       | 369      | 100               | ✓ 100                | x                                  | xx    |       |     |     |      |     |       |                            |  |  |  |          |
| 14       | 14       | 370      | 75                | ✓ 75                 | x                                  | x     |       |     |     |      |     |       |                            |  |  |  |          |
| 15       | 15       | 371      | 50                | ✓ 50                 | x                                  | x     |       |     | x   |      |     |       |                            |  |  |  |          |
| 16       | 16       | 372      | 30                | ✓ 30                 | x                                  | x     |       |     | x   |      |     |       |                            |  |  |  |          |
| 17       | 17       | 373      | 20                | ✓ 21                 | x                                  | x     |       |     | xx  |      | xx  |       |                            |  |  |  |          |
| 18       | 18       | 374      | 10                | ✓ 10                 | xx                                 | x     |       |     | x   |      | xx  |       |                            |  |  |  |          |
| 19       | 19       | 375      | 5                 | ✓ 5                  | x                                  | x     |       |     | x   | xx   | xx  |       |                            |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |     |      |     |       |                            |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |     |      |     |       |                            |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |     |      |     |       |                            |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |     |      |     |       |                            |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |      |     |       |                            |  |  |  |          |

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

Watchkeeper(s): GC

Bottom Depth: 1295 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0425 | 2145  |
| Bottom | 0452 |       |
| End    | 0534 |       |

Positional Information

Start

Lat: 49 ° 59.920 N

Lon: 127 ° 59.920 W

Bottom

Lat: 49 ° 59.91 N

Lon: 127 ° 59.94 W

End

Lat: 49 ° 59.71 N

Lon: 128 ° 0.25 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto |  |  |  |          |
| 1        |          | 376      | 2000              | ✓ 2000               |                                    |       |       | x   |     |                            |     |    |       |  |  |  |          |
| 2        |          | 377      | 1500              | ✓ 1499               |                                    |       |       | xx  |     |                            |     |    |       |  |  |  |          |
| 3        |          | 378      | 1250              | ✓ 1249               |                                    |       |       | x   |     |                            |     |    |       |  |  |  |          |
| 4        |          | 379      | 1000              | ✓ 1001               |                                    |       |       | x   |     |                            |     |    |       |  |  |  |          |
| 5        |          | 380      | 5                 | ✓ 5                  |                                    | x     |       | x   | xx  | xx                         |     |    |       |  |  |  |          |
| 6        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 7        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 8        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |

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

Watchkeeper(s): SR

Bottom Depth: 2075 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1027 | 0327  |
| Bottom | 1058 |       |
| End    | 1132 |       |

Positional Information

Start

Lat: 48° 51.100 N

Lon: 127° 18.970 W

Bottom

Lat: 48° 51.103 N

Lon: 127° 18.970 W

End

Lat: 48° 51.100 N

Lon: 127° 18.970 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Prowse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LG06

Event #:

144

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 03 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto |  |  |  |          |
| 1        |          | 381      | Bot-10            | ✓ 946                | x                                  | x     | x     |     |     |                            |     |    |       |  |  |  |          |
| 2        |          | 382      | 750               | ✓ 751                | xx                                 | xx    | xx    | x   |     |                            |     |    |       |  |  |  |          |
| 3        |          | 383      | 500               | ✓ 500                | x                                  | x     | x     | x   |     |                            |     |    |       |  |  |  |          |
| 4        |          | 384      | 400               | ✓ 400                | x                                  | x     | x     | x   |     |                            |     |    |       |  |  |  |          |
| 5        |          | 385      | 300               | ✓ 300                | x                                  | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 6        |          | 386      | 250               | ✓ 250                | x                                  | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 7        |          | 387      | 200               | ✓ 200                | xx                                 | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 8        |          | 388      | 175               | ✓ 176                | x                                  | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 9        |          | 389      | 150               | ✓ 150                | x                                  | xx    |       |     |     |                            |     |    |       |  |  |  |          |
| 10       |          | 390      | 125               | ✓ 125                | x                                  | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 11       |          | 391      | 100               | ✓ 100                | x                                  | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 12       |          | 392      | 75                | ✓ 75                 | xx                                 | x     |       |     |     |                            |     |    |       |  |  |  |          |
| 13       |          | 393      | 50                | ✓ 50                 | x                                  | x     |       |     | xx  |                            |     |    |       |  |  |  |          |
| 14       |          | 394      | 30                | ✓ 30                 | x                                  | x     |       |     | x   |                            |     |    |       |  |  |  |          |
| 15       |          | 395      | 20                | ✓ 20                 | x                                  | x     |       |     | x   |                            | xx  |    |       |  |  |  |          |
| 16       |          | 396      | 10                | ✓ 10                 | x                                  | x     |       |     | x   |                            | xx  |    |       |  |  |  |          |
| 17       |          | 397      | 5                 | ✓ 5                  | x                                  | x     |       | x   | x   | xx                         | xx  | x  | xxx   |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |     |                            |     |    |       |  |  |  |          |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth: 952 m

Transmisso Cleaned: (Y) / N

Time UTC Local

Start 1630 0930

Bottom 1643

End 1712

Positional Information

Start Lat: 49° 3.413 N

Lon: 127° 1.048 W

Bottom Lat: 49° 3.344 N

Lon: 127° 1.038 W

End Lat: 49° 3.254 N

Lon: 127° 0.974 W

Extra comments:

## Water Properties Group

Program  
STN List:

La Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LG04

Event #:

147

Ship:

JP Tully

UTC Date (dd mmm yyyy): 03 | 07 | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     |     |      |     |    | Sample Lists: Core Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|-----|------|-----|----|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | DA | Phyto                      |  |  |  |          |
| 1        | 1        | 398      | Bot-10            | ✓                  | 136                                | x     | x     |     |     |      |     |    |                            |  |  |  |          |
| 2        | 2        | 399      | 125               | ✓                  | 126                                | xx    | x     |     |     |      |     |    |                            |  |  |  |          |
| 3        | 3        | 400      | 100               | ✓                  | 101                                | x     | x     |     |     |      |     |    |                            |  |  |  |          |
| 4        | 4        | 401      | 75                | ✓                  | 75                                 | x     | x     |     |     |      |     |    |                            |  |  |  |          |
| 5        | 5        | 402      | 50                | ✓                  | 49                                 | x     | x     |     |     | x    |     |    |                            |  |  |  |          |
| 6        | 6        | 403      | 30                | ✓                  | 30                                 | x     | x     |     |     | x    |     |    |                            |  |  |  |          |
| 7        | 7        | 404      | 20                | ✓                  | 20                                 | x     | x     |     |     | x    |     | xx |                            |  |  |  |          |
| 8        | 8        | 405      | 10                | ✓                  | 9                                  | x     | x     |     |     | x    |     | xx |                            |  |  |  |          |
| 9        | 9        | 406      | 5                 | ✓                  |                                    | x     | xx    |     |     | xx   | xx  | xx |                            |  |  |  | Fluo: 75 |
| 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: 145 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1910 | 1210  |
| Bottom | 1915 |       |
| End    | 1926 |       |

Positional Information

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 11.360  | N |
| Lon: | 126 ° 49.190 | W |

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 11.300  | N |
| Lon: | 126 ° 49.200 | W |

|      |              |   |
|------|--------------|---|
| Lat: | 49 ° 11.350  | N |
| Lon: | 126 ° 49.190 | W |

Extra comments:

# Water Properties Group

Program  
STN List: La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

LG02

Event #:

150

Ship:

JP Tully

UTC Date (dd/mmm/yyyy): 03 / 07 / 2020

| Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     |     |      | Sample Lists: Core_Samples |    |       |  |  |  | Comments |  |
|-------------------|--------------------|------------------------------------|-------|-------|-----|-----|------|----------------------------|----|-------|--|--|--|----------|--|
| Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC | NH4                        | DA | Phyto |  |  |  |          |  |

| Niskin # | Firing # | Sample # | Target Pressure | Confirmed Pressure | OXY | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | DA | Phyto |  |  |  |  |            |  |
|----------|----------|----------|-----------------|--------------------|-----|-------|-------|-----|-----|------|-----|----|-------|--|--|--|--|------------|--|
| 1        | 1        | 407      | Bot-10          | ✓ 91               | x   | x     |       |     |     |      |     |    |       |  |  |  |  |            |  |
| 2        | 2        | 408      | 75              | ✓ 76               | x   | x     |       |     |     |      |     |    |       |  |  |  |  |            |  |
| 3        | 3        | 409      | 50              | ✓ 51               | x   | x     |       |     | x   |      |     |    |       |  |  |  |  |            |  |
| 4        | 4        | 410      | 30              | ✓ 30               | xx  | x     |       |     | x   |      |     |    |       |  |  |  |  |            |  |
| 5        | 5        | 411      | 20              | ✓ 20               | x   | x     |       |     | xx  |      | xx  |    |       |  |  |  |  |            |  |
| 6        | 6        | 412      | 10              | ✓ 10               | x   | xx    |       |     | x   |      | xx  |    |       |  |  |  |  |            |  |
| 7        | 7        | 413      | 5               | ✓ 5                | x   | x     |       |     | x   | xx   | xx  | x  | xxx   |  |  |  |  | Fluoro: 18 |  |
| 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: 101 m

Transmisso Cleaned: 91 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2126 | 1426  |
| Bottom | 2129 |       |
| End    | 2137 |       |

### Positional Information

Start  
Lat: 49 ° 18.750 N  
Lon: 126 ° 38.190 W

Bottom  
Lat: 49 ° 18.770 N  
Lon: 126 ° 38.180 W

End  
Lat: 49 ° 18.920 N  
Lon: 126 ° 38.260 W

Extra comments:

Cruise ID: 2020-005

Station: LG01

Event #: 151

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 03|07|2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto |  |  |  |  |          |
| 1        | 1        | 414      | Bot-10            | ✓                    | 42                                 | x     | x     |     |     | x                          |     |    |       |  |  |  |  |          |
| 2        | 2        | 415      | 30                | ✓                    | 30                                 | x     | xx    |     |     | x                          |     |    |       |  |  |  |  |          |
| 3        | 3        | 416      | 20                | ✓                    | 20                                 | x     | x     |     |     | xx                         |     | xx |       |  |  |  |  |          |
| 4        | 4        | 417      | 10                | ✓                    | 10                                 | x     | x     |     |     | x                          |     | xx |       |  |  |  |  |          |
| 5        | 5        | 418      | 5                 | ✓                    | 5                                  | xx    | x     |     |     | x                          | xx  | xx |       |  |  |  |  |          |
| 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: \_\_\_\_\_ m

Transmisso Cleaned: Y / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 22 13 | 15 13 |
| Bottom | 22 15 |       |
| End    | 22 20 |       |

Positional Information

Lat: 49 ° 20.576 N

Lon: 126 ° 35.279 W

Lat: 49 ° 20.575 N

Lon: 126 ° 35.304 W

Lat: 49 ° 20.592 N

Lon: 126 ° 35.381 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 |                            |  |  |  |  |  |  |  |          |
| 1        | 1        | 419      | 20                | ✓ 19                 | x                                  | x   |      | xx  |                            |  |  |  |  |  |  |  |          |
| 2        | 2        | 420      | 10                | ✓ 10                 | x                                  | x   |      | xx  |                            |  |  |  |  |  |  |  |          |
| 3        | 3        | 421      | 5                 | ✓ 5                  | x                                  | xx  | xx   | xx  |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): GC

Bottom Depth: 82 m

Transmisso Cleaned: 1 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0259 | 1959  |
| Bottom | 0301 |       |
| End    | 0306 |       |

Positional Information

Start

Lat: 49 ° 42.700 N

Lon: 127 ° 05.364 W

Bottom

Lat: 49 ° 42.710 N

Lon: 127 ° 05.380 W

End

Lat: 49 ° 42.760 N

Lon: 127 ° 05.430 W

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005

Station: LJ04

Event #: 159

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 04 | 07 | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     |  | Sample Lists: Core_Samples |  |  |  |  | Comments   |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|--|----------------------------|--|--|--|--|------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 |  |                            |  |  |  |  |            |
| 1        | 1        | 422      | 20                | ✓ 20                 | x                                  | x   |      | xx  |  |                            |  |  |  |  |            |
| 2        | 2        | 423      | 10                | ✓ 10                 | x                                  | xx  |      | xx  |  |                            |  |  |  |  |            |
| 3        | 3        | 424      | 5                 | ✓ 5                  | x                                  | x   | xx   | xx  |  |                            |  |  |  |  | Fluro: 4.8 |
| 4        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 5        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 6        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 7        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 8        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 9        |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 10       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 11       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 12       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 13       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 14       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 15       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 16       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 17       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 18       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 19       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 20       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 21       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 22       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 23       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |
| 24       |          |          |                   |                      |                                    |     |      |     |  |                            |  |  |  |  |            |

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

Bottom Depth: 164 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0530 | 2230  |
| Bottom | 0533 |       |
| End    | 0539 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 49 ° 35.520 N  |
|        | Lon: 127 ° 16.980 W |
| Bottom | Lat: 49 ° 35.540 N  |
|        | Lon: 127 ° 16.940 W |
| End    | Lat: 49 ° 35.570 N  |
|        | Lon: 127 ° 16.910 W |

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005

Station: LJ06

Event #: 162

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 04 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     | Sample Lists: Core_Samples |  |  |  |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|----------------------------|--|--|--|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 |                            |  |  |  |  |  |  |  |          |
| 1        |          | 425      | 20                | ✓ 20                 | x                                  | xx  |      | xx  |                            |  |  |  |  |  |  |  |          |
| 2        |          | 426      | 10                | ✓ 10                 | x                                  | x   |      | xx  |                            |  |  |  |  |  |  |  |          |
| 3        |          | 427      | 5                 | ✓ 5                  | x                                  | x   | xx   | xx  |                            |  |  |  |  |  |  |  |          |
| 4        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 5        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 6        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 7        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 8        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |     |      |     |                            |  |  |  |  |  |  |  |          |

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

Bottom Depth: 1050 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0812 | 0112  |
| Bottom | 0839 |       |
| End    | 0856 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 49 ° 27.880 N  |
|        | Lon: 127 ° 28.500 W |
| Bottom | Lat: 49 ° 27.880 N  |
|        | Lon: 127 ° 28.500 W |
| End    | Lat: 49 ° 27.880 N  |
|        | Lon: 127 ° 28.490 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |       |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|-------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Phyto |  |  |  |          |
| 1        |          | 428      | 2000              | ✓ 2001             | xx                                 | x     | x     | xx  |                            |      |     |    |       |  |  |  |          |
| 2        |          | 429      | 1500              | ✓ 1500             | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |          |
| 3        |          | 430      | 1250              | ✓ 1250             | x                                  | xx    | xx    | x   |                            |      |     |    |       |  |  |  |          |
| 4        |          | 431      | 1000              | ✓ 1000             | x                                  | x     | x     | xx  |                            |      |     |    |       |  |  |  |          |
| 5        |          | 432      | 750               | ✓ 750              | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |          |
| 6        |          | 433      | 500               | ✓ 500              | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |          |
| 7        |          | 434      | 400               | ✓ 400              | xx                                 | x     | x     | x   |                            |      |     |    |       |  |  |  |          |
| 8        |          | 435      | 300               | ✓ 300              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 9        |          | 436      | 250               | ✓ 250              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 10       |          | 437      | 200               | ✓ 200              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 11       |          | 438      | 175               | ✓ 175              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 12       |          | 439      | 150               | ✓ 150              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 13       |          | 440      | 125               | ✓ 125              | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 14       |          | 441      | 100               | ✓ 100              | x                                  | xx    |       | x   |                            |      |     |    |       |  |  |  |          |
| 15       |          | 442      | 75                | ✓ 75               | x                                  | x     |       | x   |                            |      |     |    |       |  |  |  |          |
| 16       |          | 443      | 50                | ✓ 50               | x                                  | x     |       | x   | x                          |      |     |    |       |  |  |  |          |
| 17       |          | 444      | 30                | ✓ 30               | x                                  | x     |       | x   | xx                         |      |     |    |       |  |  |  |          |
| 18       |          | 445      | 20                | ✓ 20               | x                                  | x     |       | x   | x                          |      | xx  |    |       |  |  |  |          |
| 19       |          | 446      | 10                | ✓ 10               | xx                                 | x     |       | x   | x                          |      | xx  |    |       |  |  |  |          |
| 20       |          | 447      | 5                 | ✓ 5                | x                                  | x     |       | x   | x                          | xx   | xx  | x  | xxx   |  |  |  |          |
| 21       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |  |  |  |          |
| 22       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |  |  |  |          |
| 23       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |  |  |  |          |
| 24       |          |          |                   |                    |                                    |       |       |     |                            |      |     |    |       |  |  |  |          |

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

Watchkeeper(s): STR

Bottom Depth: 21 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1538 | 0837  |
| Bottom | 1607 |       |
| End    | 1655 |       |

Positional Information

Start

Lat: 50° 27.653 N

Lon: 129° 55.070 W

Bottom

Lat: 50° 27.654 N

Lon: 129° 55.070 W

End

Lat: 50° 27.662 N

Lon: 129° 55.076 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

CS02

Event #:

181

Ship:

JP Tully

UTC Date (dd mmm yyyy): 05 | 07 | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core Samples |      |     |    |       |  |  |  | Comments    |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|-------|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Phyto |  |  |  |             |
| 1        | 1        | 448      | Bot-10            | ✓ 1910               | x                                  | x     | x     |     |                            |      |     |    |       |  |  |  |             |
| 2        | 2        | 449      | 1500              | ✓ 1500               | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |             |
| 3        | 3        | 450      | 1250              | - 1250               | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |             |
| 4        | 4        | 451      | 1000              | ✓ 1000               | x                                  | x     | x     | x   |                            |      |     |    |       |  |  |  |             |
| 5        | 5        | 452      | 750               | ✓ 750                | xx                                 | x     | x     | x   |                            |      |     |    |       |  |  |  |             |
| 6        | 6        | 453      | 500               | ✓ 500                | x                                  | xx    | xx    |     |                            |      |     |    |       |  |  |  |             |
| 7        | 7        | 454      | 400               | ✓ 400                | x                                  | x     | x     |     |                            |      |     |    |       |  |  |  |             |
| 8        | 8        | 455      | 300               | - 300                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 9        | 9        | 456      | 250               | - 250                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 10       | 10       | 457      | 200               | - 200                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 11       | 11       | 458      | 175               | - 175                | xx                                 | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 12       | 12       | 459      | 150               | - 150                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 13       | 13       | 460      | 125               | - 125                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 14       | 14       | 461      | 100               | - 100                | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 15       | 15       | 462      | 75                | - 75                 | x                                  | x     |       |     |                            |      |     |    |       |  |  |  |             |
| 16       | 16       | 463      | 50                | - 50                 | x                                  | x     |       |     | x                          |      |     |    |       |  |  |  |             |
| 17       | 17       | 464      | 30                | ✓ 30                 | xx                                 | x     |       |     | x                          |      |     |    |       |  |  |  |             |
| 18       | 18       | 465      | 20                | ✓ 20                 | x                                  | x     |       |     | x                          |      | xx  |    |       |  |  |  |             |
| 19       | 19       | 466      | 10                | ✓ 10                 | x                                  | xx    |       |     | xx                         |      | xx  |    |       |  |  |  |             |
| 20       | 20       | 467      | 5                 | ✓ 5                  | x                                  | x     |       |     | x                          | xx   | xx  |    |       |  |  |  | Fluoro 0.58 |
| 21       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |  |  |  |             |
| 22       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |  |  |  |             |
| 23       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |  |  |  |             |
| 24       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |  |  |  |             |

Version: 28May2020

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

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

Bottom Depth: 1923 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2127 | 1427  |
| Bottom | 2201 |       |
| End    | 2253 |       |

Positional Information

|        |                    |                     |
|--------|--------------------|---------------------|
| Start  | Lat: 50 ° 41.286 N | Lon: 129 ° 27.720 W |
| Bottom | Lat: 50 ° 41.240 N | Lon: 129 ° 27.800 W |
| End    | Lat: 50 ° 41.210 N | Lon: 129 ° 27.810 W |

Extra comments:

Cruise ID: 2020-005

Station: CS04

Event #: 186

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 06 | 07 | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |    |  | Sample Lists: Core_Samples |       |       |     |     |      |     |    |       |  | Comments         |
|----------|----------|----------|-------------------|----------------------|------------------------------------|----|--|----------------------------|-------|-------|-----|-----|------|-----|----|-------|--|------------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure |                                    |    |  | OXY                        | Nut-F | Nut-C | SAL | CHL | HPLC | NH4 | DA | Phyto |  |                  |
| 1        | 1        | 468      | Bot-10            | ✓ 89                 | x                                  | x  |  |                            |       |       |     |     |      |     |    |       |  |                  |
| 2        | 2        | 469      | 75                | ✓ 75                 | x                                  | xx |  |                            |       |       |     |     |      |     |    |       |  |                  |
| 3        | 3        | 470      | 50                | ✓ 50                 | xx                                 | x  |  |                            |       |       |     | x   |      |     |    |       |  | moved oxy dup to |
| 4        | 4        | 471      | 30                | ✓ 30                 | x                                  | x  |  |                            |       |       |     | x   |      |     |    |       |  | Niskin 3.        |
| 5        | 5        | 472      | 20                | ✓ 20                 | xx                                 | x  |  |                            |       |       |     | x   |      | xx  |    |       |  |                  |
| 6        | 6        | 473      | 10                | ✓ 10                 | x                                  | x  |  |                            |       |       |     | x   |      | xx  |    |       |  |                  |
| 7        | 7        | 474      | 5                 | ✓ 5                  | x                                  | x  |  |                            |       |       |     | xx  | 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): GC

Bottom Depth: 97 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0133 | 1833  |
| Bottom | 0136 |       |
| End    | 0144 |       |

Positional Information

Start

Lat: 50 ° 49.320 N

Lon: 129 ° 13.160 W

Bottom

Lat: 50 ° 49.330 N

Lon: 129 ° 13.150 W

End

Lat: 50 ° 49.270 N

Lon: 129 ° 13.260 W

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005 Station: CS06 Event #: 194 Ship: JP Tully UTC Date (dd|mmm|yyyy): 06|July|2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: Core_Samples |     |    |       |  | Comments |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|-----|----------------------------|-----|----|-------|--|----------|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC                       | NH4 | DA | Phyto |  |          |  |  |
| 1        |          | 475      | Bot-10            | ✓ 57                 | x                                  | x     |       |     |     |                            |     |    |       |  |          |  |  |
| 2        |          | 476      | 50                | ✓ 50                 | xx                                 | x     |       |     | xx  |                            |     |    |       |  |          |  |  |
| 3        |          | 477      | 30                | ✓ 30                 | x                                  | x     |       |     | x   |                            |     |    |       |  |          |  |  |
| 4        |          | 478      | 20                | ✓ 20                 | x                                  | xx    |       |     | x   |                            | xx  |    |       |  |          |  |  |
| 5        |          | 479      | 10                | ✓ 10                 | x                                  | x     |       |     | x   |                            | xx  |    |       |  |          |  |  |
| 6        |          | 480      | 5                 | ✓ 5                  | x                                  | x     |       |     | x   | xx                         | xx  | x  | 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): SR

Bottom Depth: 67 m  
Transmisso Cleaned: Y N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0938 | 0238  |
| Bottom | 0939 |       |
| End    | 0945 |       |

Positional Information

|        |                    |
|--------|--------------------|
| Start  | Lat: 50° 59.990 N  |
|        | Lon: 128° 51.990 W |
| Bottom | Lat: 50° 59.980 N  |
|        | Lon: 128° 51.980 W |
| End    | Lat: 50° 59.950 N  |
|        | Lon: 128° 51.920 W |

Extra comments:

480C  
Phyto  
CS06  
2020-005  
5 m  
bot 6  
\* NO GLUTERALDEHYDE BOTTLE -> EXTRA FORMALIN

# Water Properties Group

Program  
STN List: La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

CS09

Event #:

200

Ship:

JP Tully

UTC Date (dd/mmm/yyyy): 06 Jul 2020

| Rosette Operation |                         |  | Sampler's Initials / Samples Taken |       |       |     |     | Sample Lists: |     | Core Samples |       |  |  | Comments |  |  |
|-------------------|-------------------------|--|------------------------------------|-------|-------|-----|-----|---------------|-----|--------------|-------|--|--|----------|--|--|
| Target Pressure   | Confirmed<br>✓ Pressure |  | OXY                                | Nut-F | Nut-C | SAL | CHL | HPLC          | NH4 | DA           | Phyto |  |  |          |  |  |
| Bot-10            | ✓ 196                   |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 175               | ✓ 175                   |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 150               | ✓ 151                   |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 125               | ✓ 125                   |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 100               | ✓ 100                   |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 75                | ✓ 75                    |  | x                                  | x     |       |     |     |               |     |              |       |  |  |          |  |  |
| 50                | ✓ 50                    |  | x                                  | x     |       |     |     | x             |     |              |       |  |  |          |  |  |
| 30                | ✓ 30                    |  | x                                  | x     |       |     |     | x             |     |              |       |  |  |          |  |  |
| 20                | ✓ 20                    |  | x                                  | x     |       |     |     | x             |     | xx           |       |  |  |          |  |  |
| 10                | ✓ 10                    |  | x                                  | x     |       |     |     | xx            |     | xx           |       |  |  |          |  |  |
| 5                 | ✓ 5                     |  | xx                                 | xx    |       |     |     | x             | xx  | xx           |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |
|                   |                         |  |                                    |       |       |     |     |               |     |              |       |  |  |          |  |  |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth:

195 m

Transmisso Cleaned:

(Y) N

Time

UTC

Local

Start

1314 0614

Bottom

1317

End

1327

Positional Information

Start

Lat: 51° 12.510 N

Lon:

128° 28.240 W

Bottom

Lat: 51° 12.510 N

Lon:

128° 28.250 W

End

Lat: 51° 12.490 N

Lon: 128° 28.330 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |             | Sampler's Initials / Samples Taken |       |     |      |     | Sample Lists: Core_Samples |        |     |  |  | Comments |  |  |  |
|----------|----------|----------|-------------------|-------------|------------------------------------|-------|-----|------|-----|----------------------------|--------|-----|--|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ | Pressure                           | Nut-F | CHL | HPLC | NH4 | DA                         | Lugols | SAL |  |  |          |  |  |  |
| 1        |          | 492      | 20                |             |                                    | x     | xx  |      | xx  |                            |        |     |  |  |          |  |  |  |
| 2        |          | 493      | 10                |             |                                    | x     | x   |      | xx  |                            |        |     |  |  |          |  |  |  |
| 3        |          | 494      | 5                 |             |                                    | x     | x   | xx   | xx  | x                          | x      | X   |  |  |          |  |  |  |
| 4        |          | 5209     | LOOP              |             |                                    |       | xx  |      |     |                            |        | X   |  |  |          |  |  |  |
| 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): Sre

Bottom Depth: 203 m

Transmisso Cleaned: Y N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0651 |       |
| Bottom | 0653 |       |
| End    | 0700 |       |

Positional Information

Start

Lat: 51 ° 28.001 N

Lon: 128 ° 30.059 W

Bottom

Lat: 51 ° 29.001 N

Lon: 128 ° 30.058 W

End

Lat: 51 ° 29.001 N

Lon: 128 ° 30.059 W

Extra comments:

Collected loop

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     |    | Sample Lists: Core_Samples |  |  |  |  | Comments |  |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|----|----------------------------|--|--|--|--|----------|--|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 | DA | Lugols                     |  |  |  |  |          |  |  |  |  |
| 1        |          | 495      | 20                | ✓ 20                 | x                                  | x   |      | xx  |    |                            |  |  |  |  |          |  |  |  |  |
| 2        |          | 496      | 10                | ✓ 10                 | x                                  | xx  |      | xx  |    |                            |  |  |  |  |          |  |  |  |  |
| 3        |          | 497      | 5                 | ✓ 5                  | x                                  | x   | xx   | xx  |    |                            |  |  |  |  |          |  |  |  |  |
| 4        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 5        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 6        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 7        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 8        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 9        |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 10       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 11       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 12       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 13       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 14       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 15       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 16       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 17       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 18       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 19       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 20       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 21       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 22       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 23       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |
| 24       |          |          |                   |                      |                                    |     |      |     |    |                            |  |  |  |  |          |  |  |  |  |

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

Watchkeeper(s): SR

Bottom Depth: 29.5 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1128 | 0428  |
| Bottom | 1132 |       |
| End    | 1139 |       |

Positional Information

Start

Lat: 51 ° 15.254 N

Lon: 129 ° 21.215 W

Bottom

Lat: 51 ° 15.260 N

Lon: 129 ° 21.204 W

End

Lat: 51 ° 15.254 N

Lon: 129 ° 21.134 W

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005

Station: SS1

Event #: 215

Ship: JP Tully

UTC Date (dd/mmm/yyyy): 07 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |     |      |     |    |        | Sample Lists: Core_Samples |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-----|------|-----|----|--------|----------------------------|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | Nut-F                              | CHL | HPLC | NH4 | DA | Lugols |                            |  |  |  |          |
| 1        |          | 498      | 20                | ✓ 20                 | x                                  | x   |      | xx  |    |        |                            |  |  |  |          |
| 2        |          | 499      | 10                |                      | x                                  | x   |      | xx  |    |        |                            |  |  |  |          |
| 3        |          | 500      | 5                 |                      | x                                  | xx  | xx   | xx  |    |        |                            |  |  |  |          |
| 4        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 5        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 6        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 7        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 8        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 9        |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 10       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 11       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 12       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 13       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 14       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 15       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 16       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 17       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 18       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 19       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 20       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 21       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 22       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 23       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |
| 24       |          |          |                   |                      |                                    |     |      |     |    |        |                            |  |  |  |          |

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

Bottom Depth: 488 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1503 | 0803  |
| Bottom | 1512 |       |
| End    | 1520 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 51 ° 12.185 N  |
|        | Lon: 129 ° 59.893 W |
| Bottom | Lat: 51 ° 12.214 N  |
|        | Lon: 129 ° 59.893 W |
| End    | Lat: 51 ° 12.293 N  |
|        | Lon: 129 ° 59.896 W |

Extra comments:

## Water Properties Group

Program  
STN List:

La Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

JS

Event #:

225

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 08 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |       |     | Sample Lists: Core_Samples |      |     |    |       |     |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-------|-----|----------------------------|------|-----|----|-------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | Nut-C | SAL | CHL                        | HPLC | NH4 | DA | Phyto | DIC |  |  |          |
| 1        |          | 501      | Bot-10            | ✓ 400                | x                                  | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 2        |          | 502      | 300               | ✓ 300                | x                                  | xx    |       | x   |                            |      |     |    |       | x   |  |  |          |
| 3        |          | 503      | 250               | ✓ 250                | x                                  | x     |       |     |                            |      |     |    |       | xx  |  |  |          |
| 4        |          | 504      | 200               | ✓ 200                | x                                  | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 5        |          | 505      | 175               | ✓ 175                | xx                                 | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 6        |          | 506      | 150               | ✓ 150                | x                                  | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 7        |          | 507      | 125               | ✓ 125                | x                                  | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 8        |          | 508      | 100               | ✓ 100                | x                                  | x     |       |     |                            |      |     |    |       | x   |  |  |          |
| 9        |          | 509      | 75                | ✓ 75                 | x                                  | x     |       |     |                            |      |     |    |       | xx  |  |  |          |
| 10       |          | 510      | 50                | ✓ 50                 | x                                  | x     |       |     | x                          |      |     |    |       | x   |  |  |          |
| 11       |          | 511      | 30                | ✓ 30                 | x                                  | x     |       |     | x                          |      |     |    |       | x   |  |  |          |
| 12       |          | 512      | 20                | ✓ 20                 | x                                  | x     |       |     | x                          |      |     |    |       | x   |  |  |          |
| 13       |          | 513      | 10                | ✓ 10                 | x                                  | x     |       |     | xx                         |      |     |    |       | x   |  |  |          |
| 14       |          | 514      | 5                 | ✓ 5                  | x                                  | x     |       |     | x                          | xx   |     |    |       | x   |  |  |          |
| 15       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 16       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 17       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 18       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 19       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 20       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 21       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 22       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 23       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |
| 24       |          |          |                   |                      |                                    |       |       |     |                            |      |     |    |       |     |  |  |          |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

sn

Bottom Depth: 411 m

Transmisso Cleaned: Y1 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1027 | 0327  |
| Bottom | 1034 |       |
| End    | 1051 |       |

Positional Information

|       |                    |
|-------|--------------------|
| Start | Lat: 50° 29.800 N  |
|       | Lon: 126° 28.640 W |

|        |                    |
|--------|--------------------|
| Bottom | Lat: 50° 29.800 N  |
|        | Lon: 126° 28.650 W |

|     |                    |
|-----|--------------------|
| End | Lat: 50° 29.790 N  |
|     | Lon: 126° 28.690 W |

Extra comments:

# Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

14

Event #:

229

Ship:

JP Tully

UTC Date (dd mmm yyyy): 08 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core Samples |       |  |  |  |  |  |  |  |  | Comments    |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----------------------------|-------|--|--|--|--|--|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Phyto |  |  |  |  |  |  |  |  |             |
| 1        | 1        | 9501     | Bot-5             | ✓ 310              | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 2        | 2        | 9502     | 250               | ✓ 250              | x                                  | x     | x   |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 3        | 3        | 9503     | 200               | ✓ 200              | xx                                 | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 4        | 4        | 9504     | 175               | ✓ 175              | x                                  | xx    |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 5        | 5        | 9505     | 150               | ✓ 150              | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 6        | 6        | 9506     | 125               | ✓ 125              | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 7        | 7        | 9507     | 100               | ✓ 100              | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 8        | 8        | 9508     | 75                | ✓ 75               | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 9        | 9        | 9509     | 50                | ✓ 50               | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 10       | 10       | 9510     | 40                | ✓ 40               | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 11       | 11       | 9511     | 30                | ✓ 30               | x                                  | x     |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 12       | 12       | 9512     | 20                | ✓ 20               | x                                  | x     |     | x   |      |                            |       |  |  |  |  |  |  |  |  |             |
| 13       | 13       | 9513     | 10                | ✓ 10               | x                                  | x     |     | x   |      |                            |       |  |  |  |  |  |  |  |  |             |
| 14       | 14       | 9514     | 5                 | ✓ 5                | xx                                 | x     | x   | xx  |      |                            |       |  |  |  |  |  |  |  |  |             |
| 15       | 15       | 515      | 0                 | ✓ 0                | x                                  | x     |     | x   | xx   | x                          | x     |  |  |  |  |  |  |  |  |             |
| 16       |          | 5229     | LOOP              |                    |                                    |       | x   | xx  |      |                            |       |  |  |  |  |  |  |  |  | Fluor: 2.45 |
| 17       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 18       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 19       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 20       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 21       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 22       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 23       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |
| 24       |          |          |                   |                    |                                    |       |     |     |      |                            |       |  |  |  |  |  |  |  |  |             |

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

Bottom Depth: 316 m  
Transmisso Cleaned: 1 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2353 | 1653  |
| Bottom | 2359 |       |
| End    | 0017 |       |

Positional Information

|       |                     |
|-------|---------------------|
| Start | Lat: 49° 53.130' N  |
|       | Lon: 124° 59.660' W |

Bottom

|                     |
|---------------------|
| Lat: 49° 53.150' N  |
| Lon: 124° 59.650' W |

End

|                     |
|---------------------|
| Lat: 49° 53.160' N  |
| Lon: 124° 59.640' W |

Extra comments:  
LOOP 20Hz, 2 sat

\* Sample #s 501-514 were duplicated. Sample #s were changed to 9501-9514 on this event and left on event 225. Sample 10 515 was not 2.4. Led

# Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

12

Event #:

232

Ship:

JP Tully

UTC Date (dd mmm/yyyy): 09 July 2020

| Event #. |          | Ship:    |                   | JP Tully           |                                    | UTC Date (dd / |     |     |      |    |               |     |  |  |              |           |
|----------|----------|----------|-------------------|--------------------|------------------------------------|----------------|-----|-----|------|----|---------------|-----|--|--|--------------|-----------|
| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |                |     |     |      |    | Sample Lists: |     |  |  | Core_Samples | Comments  |
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F          | SAL | CHL | HPLC | DA | Lugols        | DIC |  |  |              |           |
| 1        | 1        | 516      | 20                | ✓ 20               |                                    | x              |     |     | x    |    |               |     |  |  |              |           |
| 2        | 2        | 517      | 10                | ✓ 10               |                                    | xx             |     |     | x    |    |               |     |  |  |              |           |
| 3        | 3        | 518      | 5                 | ✓ 5                |                                    | x              | X   |     | xx   |    |               |     |  |  |              |           |
| 4        | 4        | 519      | 0                 | ✓ 0                |                                    | x              |     |     | x    | xx | x             | x   |  |  |              |           |
| 5        |          | 5232     | LOOP              |                    |                                    |                |     | x   | xx   |    |               |     |  |  |              | Fluro 1.9 |
| 6        |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 7        |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 8        |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 9        |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 10       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 11       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 12       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 13       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 14       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 15       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 16       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 17       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 18       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 19       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 20       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 21       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 22       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 23       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |
| 24       |          |          |                   |                    |                                    |                |     |     |      |    |               |     |  |  |              |           |

Version: 28May2020

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

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

Bottom Depth: 357 m  
Transmisso Cleaned: ④ / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0335 | 2035  |
| Bottom | 0343 |       |
| End    | 0354 |       |

Positional Information

|        |                   |                    |
|--------|-------------------|--------------------|
| Start  | Lat: 49° 43.690 N | Lon: 124° 41.060 W |
| Bottom | Lat: 49° 43.700 N | Lon: 124° 41.070 W |
| End    | Lat: 49° 43.720 N | Lon: 124° 41.080 W |

Extra comments:  
loop

| 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                       | DA | Lugols |  |  |          |  |  |               |  |
| 1        |          | 520            | Bot-5             | ✓ 243                | x                                  |     | x            |       | x            |                            |    |        |  |  |          |  |  |               |  |
| 2        |          | <del>521</del> | <del>250</del>    |                      | <del>x</del>                       |     | <del>x</del> |       | <del>x</del> |                            |    |        |  |  |          |  |  | Did not use # |  |
| 3        |          | 522            | 100               | ✓ 100                | xx                                 |     | x            |       | x            |                            |    |        |  |  |          |  |  |               |  |
| 4        |          | 523            | 50                | ✓ 50                 | x                                  |     | x            |       | x            |                            |    |        |  |  |          |  |  |               |  |
| 5        |          | 524            | 25                | ✓ 25                 | x                                  |     | x            |       | x            |                            |    |        |  |  |          |  |  |               |  |
| 6        |          | 525            | 10                |                      | x                                  |     | xx           |       | x            |                            |    |        |  |  |          |  |  |               |  |
| 7        |          | 526            | 5                 |                      | x                                  |     | x            |       | x            |                            |    | x      |  |  |          |  |  | ≈ 1.8 CHL     |  |
| 8        |          | 527            | 0                 |                      | x                                  |     | x            |       | x            | xx                         |    | 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): SR

Bottom Depth: 250 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0717 | 0017  |
| Bottom | 0721 |       |
| End    | 0730 |       |

Positional Information

Start

Lat: 49 ° 43 534 N

Lon: 124 ° 15.428 W

Bottom

Lat: 49 ° 43.566 N

Lon: 124 ° 15.443 W

End

Lat: 49 ° 43.614 N

Lon: 124 ° 15.449 W

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005 Station: J13 Event #: 235 Ship: JP Tully UTC Date (dd|mmm|yyyy): 09 July 2020

| 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          | DA | Lugols |   |              |  |  |  |             |
|          |          |          |                   | ✓                  |                                    |     |       |       |     |               |    |        |   |              |  |  |  |             |
| 1        |          | 528      | Bot-5             | ✓                  | 350                                | x   |       | x     |     | x             |    |        |   |              |  |  |  |             |
| 2        |          | 529      | 250               | ✓                  | 250                                | x   |       | xx    |     | x             |    |        |   |              |  |  |  |             |
| 3        |          | 530      | 100               | ✓                  | 100                                | x   |       | x     |     | x             |    |        |   |              |  |  |  |             |
| 4        |          | 531      | 50                | ✓                  | 50                                 | x   |       | x     |     | x             |    |        |   |              |  |  |  |             |
| 5        |          | 532      | 25                | ✓                  | 25                                 | x   |       | x     |     | x             |    |        |   |              |  |  |  |             |
| 6        |          | 533      | 10                | ✓                  | 10                                 | x   |       | x     |     | x             |    |        |   |              |  |  |  |             |
| 7        |          | 534      | 5                 | ✓                  | 5                                  | xx  |       | x     |     | x             |    |        | x |              |  |  |  | 1.2 CHL MEX |
| 8        |          | 535      | 0                 | ✓                  | 2                                  | x   |       | x     |     | x             | xx |        | x |              |  |  |  | 1.9 CHL     |
| 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): 802

Bottom Depth: 350 m  
Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0814 | 0114  |
| Bottom | 0819 |       |
| End    | 0830 |       |

Positional Information

|        |                   |
|--------|-------------------|
| Start  | Lat: 49° 46.000 N |
|        | Lon: 124° 9.890 W |
| Bottom | Lat: 49° 46.000 N |
|        | Lon: 124° 9.870 W |
| End    | Lat: 49° 46.020 N |
|        | Lon: 124° 9.780 W |

Extra comments:

| 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                       | DA | Lugols |  |  |  |  |             |
| 1        |          | 536      | Bot-5             | ✓ 659              | x                                  | x   | x     | x     | x   |                            |    |        |  |  |  |  |             |
| 2        |          | 537      | 250               | ✓ 250              | x                                  |     | x     |       | x   |                            |    |        |  |  |  |  |             |
| 3        |          | 538      | 100               | ✓ 100              | x                                  |     | xx    |       | x   |                            |    |        |  |  |  |  |             |
| 4        |          | 539      | 50                | ✓ 50               | x                                  |     | x     |       | x   |                            |    |        |  |  |  |  |             |
| 5        |          | 540      | 25                | ✓ 25               | xx                                 |     | x     |       | x   |                            |    |        |  |  |  |  |             |
| 6        |          | 541      | 10                | ✓ 10               | x                                  |     | x     |       | xx  |                            |    |        |  |  |  |  |             |
| 7        |          | 542      | 5                 | ✓ 5                | x                                  | x   | x     |       | x   |                            |    | x      |  |  |  |  | ≈ 1.7-8 CHL |
| 8        |          | 543      | 0                 | ✓ 0                | x                                  |     | x     |       | x   | xx                         | x  | x      |  |  |  |  | ≈ 1.8       |
| 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): 812

Bottom Depth: 665 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0956 | 0256  |
| Bottom | 1008 |       |
| End    | 1024 |       |

Positional Information

Start

Lat: 49° 47.760 N  
Lon: 124° 01.960 W

Bottom

Lat: 49° 47.760 N  
Lon: 124° 01.950 W

End

Lat: 49° 47.760 N  
Lon: 124° 01.940 W

Extra comments:

Cruise ID: 2020-005

Station: J17

Event #: 237 239

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 09 July 2020

| 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 | DA | Lugols |  |  |  |  |           |
| 1        |          | 544      | Bot-5             | ✓ 674                | xx                                 | x   | xx    | x     | x                          |      |    |        |  |  |  |  |           |
| 2        |          | 545      | 250               | ✓ 250                | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |           |
| 3        |          | 546      | 100               | ✓ 100                | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |           |
| 4        |          | 547      | 50                | ✓ 50                 | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |           |
| 5        |          | 548      | 25                | ✓ 25                 | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |           |
| 6        |          | 549      | 10                | ✓ 10                 | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |           |
| 7        |          | 550      | 5                 | ✓ 5                  | x                                  | x   | x     |       | x                          |      |    | x      |  |  |  |  | ≈ 2.4 CHL |
| 8        |          | 551      | 0                 | ✓ 0                  | x                                  |     | x     |       | x                          | xx   | x  | x      |  |  |  |  | ≈ 1.7 CHL |
| 9        |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 10       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 11       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 12       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 13       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 14       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 15       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 16       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 17       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 18       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 19       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 20       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 21       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 22       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 23       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |
| 24       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |           |

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

Watchkeeper(s): SR

Bottom Depth: 680 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1151 | 0451  |
| Bottom | 1201 |       |
| End    | 1219 |       |

Positional Information

Start  
Lat: 49 ° 50.755 N  
Lon: 123 ° 54.004 W

Bottom  
Lat: 49 ° 50.723 N  
Lon: 123 ° 54.036 W

End  
Lat: 49 ° 50.819 N  
Lon: 123 ° 54.038 W

Extra comments:

Cruise ID: 2020-005

Station: J16

Event #: 240

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 09 | 07 | 20

| 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 | DA                         | Lugols |  |  |  |  |  |          |
|          |          |          |                   | ✓         |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 1        |          | 552      | Bot-5             | ✓         | 366      | xx                                 |     | x     |       | x   |      |                            |        |  |  |  |  |  |          |
| 2        |          | 553      | 250               | ✓         | 250      | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |  |          |
| 3        |          | 554      | 100               | ✓         | 100      | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |  |          |
| 4        |          | 555      | 50                | ✓         | 50       | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |  |          |
| 5        |          | 556      | 25                | ✓         | 25       | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |  |          |
| 6        |          | 557      | 10                | ✓         | 10       | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |  | 1.409    |
| 7        |          | 558      | 5                 | ✓         | 5        | x                                  |     | x     |       | x   |      |                            | x      |  |  |  |  |  | 1.453    |
| 8        |          | 559      | 0                 | ✓         | 1.5      | x                                  |     | x     |       | x   | xx   |                            | x      |  |  |  |  |  | 0.94     |
| 9        |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 10       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 11       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 12       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 13       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 14       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 15       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 16       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 17       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 18       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 19       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 20       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 21       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 22       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 23       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |
| 24       |          |          |                   |           |          |                                    |     |       |       |     |      |                            |        |  |  |  |  |  |          |

Version: 09M-0000

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

Watchkeeper(s): SR

Bottom Depth: 373 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1301 | 0601  |
| Bottom | 1308 |       |
| End    | 1320 |       |

Positional Information

Start

Lat: 49 ° 47.429 N

Lon: 123 ° 57.252 W

Bottom

Lat: 49 ° 47.43 N

Lon: 123 ° 57.28 W

End

Lat: 49 ° 47.43 N

Lon: 123 ° 57.28 W

Extra comments:

Water Properties Group

Program  
STN List: La\_Perouse

Sampling Log

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

Cruise ID: 2020-005 Station: J14 Event #: 241 Ship: JP Tully UTC Date (dd mmm yyyy): 09 July 2020

| 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 | DA                         | Lugols |  |  |  |  |          |
| 1        |          | 560      | Bot-5             | ✓ 603              | x                                  | x   | x     | x     | x   |      |                            |        |  |  |  |  |          |
| 2        |          | 561      | 250               | ✓ 250              | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |          |
| 3        |          | 562      | 100               | ✓ 100              | xx                                 |     | x     |       | x   |      |                            |        |  |  |  |  |          |
| 4        |          | 563      | 50                | ✓ 50               | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |          |
| 5        |          | 564      | 25                | ✓ 25               | x                                  |     | x     |       | x   |      |                            |        |  |  |  |  |          |
| 6        |          | 565      | 10                | ✓ 10               | x                                  |     | x     |       | xx  |      |                            |        |  |  |  |  |          |
| 7        |          | 566      | 5                 | ✓ 5                | x                                  | x   | x     |       | x   |      |                            | x      |  |  |  |  |          |
| 8        |          | 567      | 0                 | ✓ 0                | x                                  |     | xx    |       | x   | xx   |                            | 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): SR

Bottom Depth: 601 m  
Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1407 | 0707  |
| Bottom | 1416 |       |
| End    | 1429 |       |

Positional Information

|       |                   |
|-------|-------------------|
| Start | Lat: 49° 47.185 N |
|       | Lon: 124° 5.670 W |

Bottom

|                   |
|-------------------|
| Lat: 49° 47.189 N |
| Lon: 124° 5.662 W |

End

|                   |
|-------------------|
| Lat: 49° 47.155 N |
| Lon: 124° 5.634 W |

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

J12

Event #:

243

Ship:

JP Tully

UTC Date (dd|mmm|yyyy):

09 July 2020

| 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 | DA | Lugols |  |  |  |  |            |
| 1        |          | 568      | Bot-5             | ✓ 320                | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |            |
| 2        |          | 569      | 250               | ✓ 250                | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |            |
| 3        |          | 570      | 100               | ✓ 100                | xx                                 |     | x     |       | x                          |      |    |        |  |  |  |  |            |
| 4        |          | 571      | 50                | ✓ 50                 | x                                  |     | x     |       | x                          |      |    |        |  |  |  |  |            |
| 5        |          | 572      | 25                | ✓ 25                 | x                                  |     | x     |       | xx                         |      |    |        |  |  |  |  |            |
| 6        |          | 573      | 10                | ✓ 10                 | x                                  |     | xx    |       | x                          |      |    |        |  |  |  |  |            |
| 7        |          | 574      | 5                 | ✓ 5                  | x                                  |     | x     |       | x                          |      |    | x      |  |  |  |  | 0.8 ~ CIAL |
| 8        |          | 575      | 0                 | ✓ 0                  | x                                  |     | x     |       | x                          | xx   | x  | x      |  |  |  |  | 1.5 CHL    |
| 9        |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 10       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 11       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 12       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 13       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 14       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 15       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 16       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 17       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 18       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 19       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 20       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 21       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 22       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 23       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |
| 24       |          |          |                   |                      |                                    |     |       |       |                            |      |    |        |  |  |  |  |            |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s): SR

Bottom Depth: 328 m

Transmisso Cleaned: (Y) N

Time UTC Local

Start 1540 0840

Bottom 1545

End 1556

Positional Information

Start Lat: 49° 45.830 N

Lon: 124° 14.430 W

Bottom Lat: 49° 45.830 N

Lon: 124° 14.440 W

End Lat: 49° 45.800 N

Lon: 124° 14.430 W

Extra comments:

## Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

22

Event #:

245

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 09 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core Samples |        |     |  |          | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|----------|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |          |          |
| 1        |          | 576      | 20                | ✓ 20               |                                    | x     |     | x   |      |                            |        |     |  |          |          |
| 2        |          | 577      | 10                | ✓ 10               |                                    | x     |     | xx  |      |                            |        |     |  |          |          |
| 3        |          | 578      | 5                 | ✓ 5                |                                    | x     |     | x   |      |                            |        |     |  |          |          |
| 4        |          | 579      | 0                 | ✓ 0                |                                    | xx    |     | x   | xx   | x                          | x      |     |  | ~3.5 CHL |          |
| 5        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 6        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 7        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 8        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 9        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 10       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 11       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 12       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 13       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 14       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 15       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 16       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 17       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 18       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 19       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 20       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 21       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 22       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 23       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |
| 24       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |          |          |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth: 356 m

Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1704 | 1004  |
| Bottom | 1709 |       |
| End    | 1718 |       |

Positional Information

Start  
Lat: 49° 40.220 N  
Lon: 124° 16.330 WBottom  
Lat: 49° 40.210 N  
Lon: 124° 16.320 WEnd  
Lat: 49° 40.220 N  
Lon: 124° 16.320 W

Extra comments:

# Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

9

Event #:

249

Ship:

JP Tully

UTC Date (dd/mmm/yyyy): 09 July 2020

| Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     | Sample Lists: Core Samples |    |        |     | Comments |  |  |  |
|-------------------|--------------------|------------------------------------|-------|-----|-----|----------------------------|----|--------|-----|----------|--|--|--|
| Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC                       | DA | Lugols | DIC |          |  |  |  |

| Niskin # | Firing # | Sample # | Target Pressure | Confirmed Pressure | OXY | Nut-F | SAL | CHL | HPLC | DA | Lugols | DIC |  |  |  |  |  |            |
|----------|----------|----------|-----------------|--------------------|-----|-------|-----|-----|------|----|--------|-----|--|--|--|--|--|------------|
| 1        | 1        | 580      | 20              | ✓ 20               |     | x     |     | x   |      |    |        |     |  |  |  |  |  |            |
| 2        | 2        | 581      | 10              | ✓ 10               |     | x     |     | x   |      |    |        |     |  |  |  |  |  |            |
| 3        | 3        | 582      | 5               | ✓ 5                |     | x     |     | x   |      |    |        |     |  |  |  |  |  |            |
| 4        | 4        | 583      | 0               | ✓ 0                |     | x     |     | x   | xx   |    |        |     |  |  |  |  |  | Fluro 1.76 |
| 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: 168 m

Transmisso Cleaned: 01 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2222 | 15    |
| Bottom | 2226 |       |
| End    | 2233 |       |

### Positional Information

Start  
Lat: 49 ° 35.500 N  
Lon: 124 ° 38.360 W

Bottom  
Lat: 49 ° 35.490 N  
Lon: 124 ° 38.360 W

End  
Lat: 49 ° 35.500 N  
Lon: 124 ° 38.340 W

Extra comments:

| Cruise ID: |          |          | 2020-005          |                    |                                    | Station: |     |     | 6    |               |        | Event #: |  |              | 100 |  |              |          |  |  |
|------------|----------|----------|-------------------|--------------------|------------------------------------|----------|-----|-----|------|---------------|--------|----------|--|--------------|-----|--|--------------|----------|--|--|
| Niskin #   | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |          |     |     |      | Sample Lists: |        |          |  | Core_Samples |     |  |              | Comments |  |  |
|            |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F    | SAL | CHL | HPLC | DA            | Lugols | DIC      |  |              |     |  |              |          |  |  |
| 1          | 1        | 584      | 20                | ✓ 20               |                                    | x        |     | x   |      |               |        |          |  |              |     |  |              |          |  |  |
| 2          | 2        | 585      | 10                | ✓ 10               |                                    | x        |     | x   |      |               |        |          |  |              |     |  |              |          |  |  |
| 3          | 3        | 586      | 5                 | ✓ 5                |                                    | x        |     | x   |      |               |        |          |  |              |     |  |              |          |  |  |
| 4          | 4        | 587      | 0                 | ✓ 0                |                                    | x        |     | x   | xx   |               |        |          |  |              |     |  | Fluoro: 1.96 |          |  |  |
| 5          |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 6          |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 7          |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 8          |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 9          |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 10         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 11         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 12         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 13         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 14         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 15         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 16         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 17         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 18         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 19         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 20         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 21         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 22         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 23         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |
| 24         |          |          |                   |                    |                                    |          |     |     |      |               |        |          |  |              |     |  |              |          |  |  |

Start Date: 2020-07-10 08:00:00

End Date: 2020-07-10 18:00:00

Location: 36N 156W

Depth: 1000m

Speed: 1.0 knots

Heading: 090

Altitude: 10m

Barometric Pressure: 1013.25 hPa

Water Temperature: 20.0 C

Air Temperature: 25.0 C

Humidity: 80%

Wind Speed: 10 knots

Wave Height: 1.0m

Swell Direction: 090

Swells: 1.0m

Current Speed: 0.1 knots

Current Direction: 090

Bottom Type: S

Visibility: 10km

Cloud Cover: 0%

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom: 0m

Cloud Middle: 0m

Cloud Surface: 0m

Cloud Layer: 0m

Cloud Type: 0%

Cloud Height: 0m

Cloud Base: 0m

Cloud Top: 0m

Cloud Bottom:

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): Ge

Bottom Depth: 192 m

Transmisso Cleaned: 01 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2248 | 1648  |
| Bottom | 2352 |       |
| End    | 2359 |       |

Positional Information

Start

Lat: 49 ° 30.650 N

Lon: 124 ° 27.950 W

Bottom

Lat: 49 ° 30.650 N

Lon: 124 ° 27.940 W

End

Lat: 49 ° 30.620 N

Lon: 124 ° 27.920 W

Extra comments:

Water Properties Group

Program  
STN List:

SoG

Sampling Log

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

Cruise ID:

2020-005

Station:

BS-11

Event #:

254

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 10 | July | 2020

| Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |     |  |  | Comments |  |
|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|----------|--|
| Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |          |  |

| Niskin # | Firing # | Sample # | Target Pressure | Confirmed Pressure | OXY | Nut-F | SAL | CHL | HPLC | DA | Lugols | DIC |  |  |  |  |  |  |        |
|----------|----------|----------|-----------------|--------------------|-----|-------|-----|-----|------|----|--------|-----|--|--|--|--|--|--|--------|
| 1        | 1        | 588      | 20              | ✓ 20               |     | x     |     | x   |      |    |        |     |  |  |  |  |  |  |        |
| 2        | 2        | 589      | 10              | ✓ 10               |     | x     |     | x   |      |    |        |     |  |  |  |  |  |  |        |
| 3        | 3        | 590      | 5               | ✓ 5                |     | xx    |     | xx  |      |    |        |     |  |  |  |  |  |  |        |
| 4        | 4        | 591      | 0               | ✓ 0                |     | x     |     | x   | xx   | x  | x      |     |  |  |  |  |  |  | Fluro: |
| 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: 63 m

Transmisso Cleaned: ① N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0243 | 1943  |
| Bottom | 0246 |       |
| End    | 0257 |       |

Positional Information

Start Lat: 49 ° 29.050 N

Start Lon: 124 ° 45.970 W

Bottom Lat: 49 ° 29.050 N

Bottom Lon: 124 ° 45.970 W

End Lat: 49 ° 29.040 N

End Lon: 124 ° 45.960 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |     |  |  | Comments |  |             |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|--|----------|--|-------------|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |  |          |  |             |  |
| 1        | 1        | 592      | 20                | ✓ 20.                |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |             |  |
| 2        | 2        | 593      | 10                | ✓ 10.                |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |             |  |
| 3        | 3        | 594      | 5                 | ✓ 5                  |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |             |  |
| 4        | 4        | 595      | 0                 | ✓ 0                  |                                    | x     |     | x   | xx   |                            |        |     |  |  |          |  | Fluoro: 5.6 |  |
| 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: 330 m

Transmisso Cleaned: Y / N

Time UTC Local

Start 0449 2149

Bottom 0457

End 0507

Positional Information

Start Lat: 49 ° 26.590 N  
Lon: 124 ° 20.340 W

Bottom Lat: 49 ° 26.590 N  
Lon: 124 ° 20.340 W

End Lat: 49 ° 26.620 N  
Lon: 124 ° 20.330 W

Extra comments:

Cruise ID: 2020-005

Station: 2

Event #: 256

Ship: JP Tully

UTC Date (dd mmm/yyyy): 10 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |     |  |  |  |  | Comments      |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|--|--|---------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |  |  |               |
| 1        | 1        | 596      | 20                | ✓ 20                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |               |
| 2        | 2        | 597      | 10                | ✓ 10                 |                                    | x     |     | xx  |      |    |                            |     |  |  |  |  |               |
| 3        | 3        | 598      | 5                 | ✓ 5                  |                                    | x     | X   | x   |      |    |                            |     |  |  |  |  |               |
| 4        | 4        | 599      | 0                 | ✓ 0                  |                                    | xx    | X   | x   | xx   | x  | x                          |     |  |  |  |  | Fluoro: 5.90. |
| 5        |          | 55256    | LOOP              |                      |                                    |       | X   | XX  |      |    |                            |     |  |  |  |  |               |
| 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: 287 m

Transmisso Cleaned: Y / N

|        |      |       |
|--------|------|-------|
| Time   | UTC  | Local |
| Start  | 0608 | 2308  |
| Bottom | 0614 |       |
| End    | 0623 |       |

Positional Information

Start

Lat: 49 ° 24.150 N

Lon: 124 ° 09.190 W

Bottom

Lat: 49 ° 24.150 N

Lon: 124 ° 09.180 W

End

Lat: 49 ° 24.150 N

Lon: 124 ° 09.170 W

Extra comments:

## Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

27

Event #:

259

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 10 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |     |  |  | Comments |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|--|----------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |  |          |
| 1        |          | 600      | 20                | ✓ 20               |                                    | xx    |     | xx  |      |                            |        |     |  |  |          |
| 2        |          | 601      | 10                | ✓ 10               |                                    | x     |     | x   |      |                            |        |     |  |  |          |
| 3        |          | 602      | 5                 | ✓ 5                |                                    | x     | x   | x   |      |                            |        |     |  |  |          |
| 4        |          | 603      | 0                 | ✓ 1.6              |                                    | x     |     | x   | xx   | x                          | x      |     |  |  |          |
| 5        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 6        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 7        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 8        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 9        |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 10       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 11       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 12       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 13       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 14       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 15       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 16       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 17       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 18       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 19       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 20       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 21       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 22       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 23       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |
| 24       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |          |

Version: 28May2020

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

Profile type:  
☒ ROS ☐ TRM ☐ X-Niskin ☐ other?  
Watchkeeper(s): 812

Bottom Depth: 352 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0844 | 0144  |
| Bottom | 0851 |       |
| End    | 0859 |       |

## Positional Information

Start  
Lat: 49° 19.220 N  
Lon: 123° 48.020 W

Bottom  
Lat: 49° 19.190 N  
Lon: 123° 48.060 W

End  
Lat: 49° 19.170 N  
Lon: 123° 47.970 W

Extra comments:

## Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

GEO1

Event #:

263

Ship:

JP Tully

UTC Date (dd|mmm|yyyy): 10 July 2020

| Rosette Operation |                    | Sampler's Initials / Samples Taken |       | Sample Lists: Core_Samples |     |      |    |        |     |    |  |   |  | Comments |  |         |
|-------------------|--------------------|------------------------------------|-------|----------------------------|-----|------|----|--------|-----|----|--|---|--|----------|--|---------|
| Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL                        | CHL | HPLC | DA | Lugols | DIC |    |  |   |  |          |  |         |
| 1                 |                    | 604                                | 20    | ✓                          | 20  |      | x  |        | x   |    |  |   |  |          |  |         |
| 2                 |                    | 605                                | 10    | ✓                          | 10  |      | x  |        | x   |    |  |   |  |          |  | 1.2 CHL |
| 3                 |                    | 606                                | 5     | ✓                          | 5   |      | x  | x      | x   |    |  |   |  |          |  | 1.5 CHL |
| 4                 |                    | 607                                | 0     | ✓                          |     |      | xx |        | xx  | xx |  | x |  |          |  | 1.8 CHL |
| 5                 |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 6                 |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 7                 |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 8                 |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 9                 |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 10                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 11                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 12                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 13                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 14                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 15                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 16                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 17                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 18                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 19                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 20                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 21                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 22                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 23                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |
| 24                |                    |                                    |       |                            |     |      |    |        |     |    |  |   |  |          |  |         |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth:

406 m

Transmisso Cleaned:

(Y) / N

Time

UTC

Local

Start

1056

0356

Bottom

1103

End

1112

Positional Information

Start

Lat: 49° 15.070 N

Lon:

123° 45.020 W

Bottom

Lat: 49° 15.070 N

Lon: 123° 45.020 W

End

Lat: 49° 15.070 N

Lon: 123° 45.020 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Prowse

## Sampling Log

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

Cruise ID:

2020-005

Station:

VAN4

Event #:

266

Ship:

JP Tully

UTC Date (dd mmm yyyy):

10 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core Samples |     |  |  | Comments |  |  |  |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |          |  |  |  |
| 1        |          | 608      | Bot-5             | ✓ 56               | x                                  | x     |     |     |      |    |                            | x   |  |  |          |  |  |  |
| 2        |          | 609      | 50                | ✓ 50               | x                                  | x     |     |     |      |    |                            | x   |  |  |          |  |  |  |
| 3        |          | 610      | 40                | ✓ 40               | x                                  | x     |     |     |      |    |                            | x   |  |  |          |  |  |  |
| 4        |          | 611      | 30                | ✓ 30               | x                                  | x     |     |     |      |    |                            | xx  |  |  |          |  |  |  |
| 5        |          | 612      | 20                | ✓ 20               | x                                  | x     |     | xx  |      |    |                            | x   |  |  |          |  |  |  |
| 6        |          | 613      | 10                | ✓ 10               | xx                                 | x     |     | x   |      |    |                            | x   |  |  |          |  |  |  |
| 7        |          | 614      | 5                 | ✓ 5                | x                                  | x     |     | x   |      |    |                            | x   |  |  |          |  |  |  |
| 8        |          | 615      | 0                 | ✓ 0                | x                                  | xx    |     | x   | xx   |    |                            | 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):

SR

Bottom Depth: 62 m

Transmisso Cleaned: (Y) N

Time UTC Local

Start 1511 0811

Bottom 1512

End 1518

Positional Information

Start Lat: 49° 17.820 N

Lon: 123° 5.740 W

Bottom Lat: 49° 17.830 N

Lon: 123° 5.740 W

End Lat: 49° 17.800 N

Lon: 123° 5.740 W

Extra comments:

## Water Properties Group

Program  
STN List: La Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

VAN5

Event #:

267

Ship:

JP Tully

UTC Date (dd mmm yyyy): 10 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: |        |         |  | Core Samples |  |  |  | Comments         |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|---------------|--------|---------|--|--------------|--|--|--|------------------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA            | Lugols | DIC     |  |              |  |  |  |                  |
| 1        |          | 616      | Bot-5             | ✓ 33.4             | x                                  | xx    |     |     |      |               |        | x       |  |              |  |  |  | 2.5 m off bottom |
| 2        |          | 617      | 30                | ✓ 30               | x                                  | x     |     |     |      |               |        | x       |  |              |  |  |  |                  |
| 3        |          | 618      | 20                | ✓ 20               | x                                  | x     |     | x   |      |               |        | x       |  |              |  |  |  |                  |
| 4        |          | 619      | 10                | ✓ 10               | x                                  | x     |     | x   |      |               |        | xx      |  |              |  |  |  |                  |
| 5        |          | 620      | 5                 | ✓ 5                | x                                  | x     |     | x   |      |               |        | x       |  |              |  |  |  |                  |
| 6        |          | 621      | 0                 | ✓ 1.6              | xx                                 | x     |     | xx  | xx   |               |        | x       |  |              |  |  |  |                  |
| 7        |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 8        |          |          |                   |                    |                                    |       |     |     |      |               |        | 2x Hgcl |  |              |  |  |  |                  |
| 9        |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 10       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 11       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 12       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 13       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 14       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 15       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 16       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 17       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 18       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 19       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 20       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 21       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 22       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 23       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |
| 24       |          |          |                   |                    |                                    |       |     |     |      |               |        |         |  |              |  |  |  |                  |

Profile type:

ROB TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth: 37 m

Transmisso Cleaned: (Y) 1 N

Time UTC Local

Start 1615 0915

Bottom 1616

End 1620

Positional Information

Start Lat: 49 ° 17.660 N

Lon: 123 ° 3.500 W

Bottom Lat: 49 ° 17.660 N

Lon: 123 ° 3.500 W

End Lat: 49 ° 17.660 N

Lon: 123 ° 3.500 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |         |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|---------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC     |  |  |  |  |          |
| 1        |          | 622      | Bot-5             | ✓ 57                 | x                                  | x     |     |     |      |    |                            | x       |  |  |  |  |          |
| 2        |          | 623      | 50                | ✓ 50                 | x                                  | x     |     |     |      |    |                            | x       |  |  |  |  |          |
| 3        |          | 624      | 40                | ✓ 40                 | xx                                 | x     |     |     |      |    |                            |         |  |  |  |  |          |
| 4        |          | 625      | 30                | ✓ 30                 | x                                  | x     |     |     |      |    |                            | x       |  |  |  |  |          |
| 5        |          | 626      | 20                | ✓ 20                 | x                                  | x     |     | x   |      |    |                            | x       |  |  |  |  |          |
| 6        |          | 627      | 10                | ✓ 10                 | x                                  | xx    |     | x   |      |    |                            | x       |  |  |  |  |          |
| 7        |          | 628      | 5                 | ✓ 5                  | x                                  | x     |     | xx  |      |    |                            | xx      |  |  |  |  |          |
| 8        |          | 629      | 0                 | ✓ 0                  | x                                  | x     |     | x   | xx   |    |                            | x       |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |     |     |      |    |                            | 2x Hgcl |  |  |  |  |          |
| 11       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 12       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 13       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 14       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 15       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 16       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 17       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 18       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 19       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 20       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 21       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 22       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 23       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 24       |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |

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

Watchkeeper(s): SR

Bottom Depth: 62 m

Transmisso Cleaned: ☒ Y ☐ N

|        |      |       |
|--------|------|-------|
| Time   | UTC  | Local |
| Start  | 1720 | 1020  |
| Bottom | 1721 |       |
| End    | 1730 |       |

Positional Information

Start

Lat: 49° 17.940 N  
Lon: 122° 58.890 W

Bottom

Lat: 49° 17.940 N  
Lon: 122° 58.890 W

End

Lat: 49° 17.940 N  
Lon: 122° 58.890 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |         |  |  | Comments |          |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|---------|--|--|----------|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC     |  |  |          |          |
| 1        |          | 630      | Bot-5             | ✓ 31                 | xx                                 | x     |     |     |      |    |                            | x       |  |  | 630      | 631      |
| 2        |          | 631      | 30                | ✓ 36                 | x                                  | x     |     |     |      |    |                            | xx      |  |  | Nut-F    | Nut-F    |
| 3        |          | 632      | 20                | ✓ 20                 | x                                  | x     |     | x   |      |    |                            | x       |  |  | IND0     | IND0     |
| 4        |          | 633      | 10                | ✓ 10                 | x                                  | xx    |     | xx  |      |    |                            | x       |  |  | 2020-005 | 2020-005 |
| 5        |          | 634      | 5                 | ✓ 5                  | x                                  | x     |     | x   |      |    |                            | x       |  |  | Bot-5 m  | 30 m     |
| 6        |          | 635      | 0                 | ✓ 1.6                | x                                  | x     |     | x   | xx   | x  | x                          | x       |  |  | bot 1    | bot 2    |
| 7        |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |          |          |
| 8        |          |          |                   |                      |                                    |       |     |     |      |    |                            | 2x Hgcl |  |  |          |          |
| 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: 37 m  
Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1802 | 1102  |
| Bottom | 1803 |       |
| End    | 1809 |       |

Positional Information  
Start  
Lat: 49 ° 18.26 N  
Lon: 122 ° 56.389 W

Bottom  
Lat: 49 ° 18.26 N  
Lon: 122 ° 56.384 W

End  
Lat: 49 ° 18.272 N  
Lon: 122 ° 56.382 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |                                  |  |  | Comments    |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|----------------------------------|--|--|-------------|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC                              |  |  |             |  |  |
| 1        | 1        | 636      | Bot-5             | ✓ 154                | x                                  | x     |     |     |      |                            |        | x                                |  |  |             |  |  |
| 2        | 2        | 637      | 150               | ✓ 150                | x                                  | xx    |     |     |      |                            |        |                                  |  |  |             |  |  |
| 3        | 3        | 638      | 125               | ✓ 125                | xx                                 | x     |     |     |      |                            |        | xx                               |  |  |             |  |  |
| 4        | 4        | 639      | 100               | ✓ 100                | x                                  | x     |     |     |      |                            |        | x                                |  |  |             |  |  |
| 5        | 5        | 640      | 75                | ✓ 75                 | x                                  | x     |     |     |      |                            |        | x                                |  |  |             |  |  |
| 6        | 6        | 641      | 50                | ✓ 50                 | x                                  | x     |     |     |      |                            |        | x                                |  |  |             |  |  |
| 7        | 7        | 642      | 40                | ✓ 40                 | xx                                 | x     |     |     |      |                            |        |                                  |  |  |             |  |  |
| 8        | 8        | 643      | 30                | ✓ 30                 | x                                  | x     |     |     |      |                            |        | xx                               |  |  |             |  |  |
| 9        | 9        | 644      | 20                | ✓ 20                 | x                                  | xx    |     | x   |      |                            |        | x                                |  |  |             |  |  |
| 10       | 10       | 645      | 10                | ✓ 10                 | x                                  | x     |     | x   |      |                            |        | x                                |  |  |             |  |  |
| 11       | 11       | 646      | 5                 | ✓ 5                  | x                                  | x     | X   | x   |      |                            |        | x                                |  |  |             |  |  |
| 12       | 12       | 647      | 0                 | ✓ 0                  | x                                  | x     | X   | xx  | xx   |                            |        | x                                |  |  | Fluoro: 7.0 |  |  |
| 13       |          | 5273     | LOOP              |                      |                                    |       | X   | XX  |      |                            |        |                                  |  |  |             |  |  |
| 14       |          |          |                   |                      |                                    |       |     |     |      |                            |        | 2x H <sub>2</sub> O <sub>2</sub> |  |  |             |  |  |
| 15       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 16       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 17       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 18       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 19       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 20       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 21       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 22       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 23       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |
| 24       |          |          |                   |                      |                                    |       |     |     |      |                            |        |                                  |  |  |             |  |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): Gic

Bottom Depth: 163 m

Transmisso Cleaned: ⑤ / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1942 | 1242  |
| Bottom | 1946 |       |
| End    | 2002 |       |

Positional Information

Start

Lat: 49 ° 20.989 N

Lon: 122 ° 54.136 W

Bottom

Lat: 49 ° 20.993 N

Lon: 122 ° 54.138 W

End

Lat: 49 ° 21.025 N

Lon: 122 ° 54.144 W

Extra comments:

LOOP

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core Samples |     |   |         | Comments |  |  |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|---|---------|----------|--|--|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |   |         |          |  |  |  |  |  |
|          |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 1        | 1        | 648      | Bot-5             | ✓                    | 215                                | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 2        | 2        | 649      | 200               | ✓                    | 200                                | x     | xx  | x   |      |    |                            |     |   |         |          |  |  |  |  |  |
| 3        | 3        | 650      | 175               | ✓                    | 175                                | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 4        | 4        | 651      | 150               | ✓                    | 150                                | xx    | x   |     |      |    |                            |     |   | xx      |          |  |  |  |  |  |
| 5        | 5        | 652      | 125               | ✓                    | 125                                | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 6        | 6        | 653      | 100               | ✓                    | 100                                | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 7        | 7        | 654      | 75                | ✓                    | 75                                 | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 8        | 8        | 655      | 50                | ✓                    | 50                                 | x     | x   |     |      |    |                            |     |   | x       |          |  |  |  |  |  |
| 9        | 9        | 656      | 40                | ✓                    | 40                                 | x     | xx  |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 10       | 10       | 657      | 30                | ✓                    | 30                                 | xx    | x   |     |      |    |                            |     |   | xx      |          |  |  |  |  |  |
| 11       | 11       | 658      | 20                | ✓                    | 20                                 | x     | x   |     | xx   |    |                            |     |   | x       |          |  |  |  |  |  |
| 12       | 12       | 659      | 10                | ✓                    | 10                                 | x     | x   |     | x    |    |                            |     |   | x       |          |  |  |  |  |  |
| 13       | 13       | 660      | 5                 | ✓                    | 5                                  | x     | x   | x   | x    |    |                            |     |   | x       |          |  |  |  |  |  |
| 14       | 14       | 661      | 0                 | ✓                    | 0                                  | x     | x   |     | x    | xx | x                          | x   | x | x       |          |  |  |  |  |  |
| 15       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 16       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   | 2x Hgcl |          |  |  |  |  |  |
| 17       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 18       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 19       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 20       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 21       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 22       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 23       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |
| 24       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |   |         |          |  |  |  |  |  |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): GC

Bottom Depth: 223 m

Transmisso Cleaned: (P) N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 21:37 | 14:34 |
| Bottom | 21:41 |       |
| End    | 21:58 |       |

Positional Information

Start

Lat: 49 ° 23.290 N

Lon: 122 ° 52.490 W

Bottom

Lat: 49 ° 23.290 N

Lon: 122 ° 52.500 W

End

Lat: 49 ° 23.300 N

Lon: 122 ° 52.510 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core Samples |         |  |  |  |  | Comments |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|---------|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC     |  |  |  |  |          |
| 1        | 1        | 662      | Bot-5             | ✓ 67                 | x                                  | x     |     |     |      |    |                            | x       |  |  |  |  |          |
| 2        | 2        | 663      | 50                | ✓ 50                 | x                                  | x     |     |     |      |    |                            | x       |  |  |  |  |          |
| 3        | 3        | 664      | 40                | ✓ 40                 | x                                  | x     |     |     |      |    |                            |         |  |  |  |  |          |
| 4        | 4        | 665      | 30                | ✓ 30                 | x                                  | xx    |     |     |      |    |                            | x       |  |  |  |  |          |
| 5        | 5        | 666      | 20                | ✓ 20                 | x                                  | x     |     | x   |      |    |                            | xx      |  |  |  |  |          |
| 6        | 6        | 667      | 10                | ✓ 10                 | x                                  | x     |     | x   |      |    |                            | x       |  |  |  |  |          |
| 7        | 2        | 668      | 5                 | ✓ 5                  | xx                                 | x     |     | x   |      |    |                            | x       |  |  |  |  |          |
| 8        | 8        | 669      | 0                 | ✓ 0                  | x                                  | x     |     | xx  | xx   |    |                            | x       |  |  |  |  |          |
| 9        |          |          |                   |                      |                                    |       |     |     |      |    |                            |         |  |  |  |  |          |
| 10       |          |          |                   |                      |                                    |       |     |     |      |    |                            | 2x Hgcl |  |  |  |  |          |
| 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: 73 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2336 | 1636  |
| Bottom | 2339 |       |
| End    | 2348 |       |

Positional Information

StartLat: 49 ° 27.430 N

StartLon: 122 ° 52.680 W

BottomLat: 49 ° 27.440 N

BottomLon: 122 ° 52.690 W

EndLat: 49 ° 27.440 N

EndLon: 122 ° 52.690 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |         |  | Comments |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|---------|--|----------|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC     |  |          |  |  |  |
| 1        | 1        | 670      | Bot-5             | ✓ 13.9               | x                                  | x     |     | x   |      |                            |        | x       |  |          |  |  |  |
| 2        | 2        | 671      | 5                 | ✓ 5                  | x                                  | x     |     | x   |      |                            |        | x       |  |          |  |  |  |
| 3        | 3        | 672      | 0                 | ✓ 0                  | x                                  | x     |     | x   |      |                            |        | x       |  |          |  |  |  |
| 4        |          |          |                   |                      |                                    |       |     |     |      |                            |        |         |  |          |  |  |  |
| 5        |          |          |                   |                      |                                    |       |     |     |      |                            |        | 2x Hg/L |  |          |  |  |  |
| 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: \_\_\_\_\_ m

Transmisso Cleaned: ☒ 1 N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0155 | 1855  |
| Bottom | 0156 |       |
| End    | 0159 |       |

Positional Information

Start

Lat: 49 ° 17.510 N

Lon: 122 ° 54.440 W

▼

Bottom

Lat: 49 ° 17.510 N

Lon: 122 ° 54.430 W

▼

End

Lat: 49 ° 17.510 N

Lon: 122 ° 54.380 W

Extra comments:

## Water Properties Group

Program  
STN List:

La\_Perouse

## Sampling Log

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

Cruise ID:

2020-005

Station:

VAN1

Event #:

282

Ship:

JP Tully

UTC Date (dd mmm yyyy):

11 July 2020

| Cruise ID: |          |          | 2020-005          |                    | Station:                           |       | VANT |     | Event #: |    | Date:  |                            | Time:   |  | Comments |  |          |
|------------|----------|----------|-------------------|--------------------|------------------------------------|-------|------|-----|----------|----|--------|----------------------------|---------|--|----------|--|----------|
| Niskin #   | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |      |     |          |    |        | Sample Lists: Core_Samples |         |  |          |  | Comments |
|            |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL  | CHL | HPLC     | DA | Lugols | DIC                        |         |  |          |  |          |
| 1          |          | 673      | Bot-5             | ✓ 110              | x                                  | x     |      |     |          |    |        |                            | x       |  |          |  |          |
| 2          |          | 674      | 100               | ✓ 100              | x                                  | xx    | x    |     |          |    |        |                            | x       |  |          |  |          |
| 3          |          | 675      | 75                | ✓ 75               | xx                                 | x     |      |     |          |    |        |                            | x       |  |          |  |          |
| 4          |          | 676      | 50                | ✓ 50               | x                                  | x     |      |     |          |    |        |                            | xx      |  |          |  |          |
| 5          |          | 677      | 40                | ✓ 40               | x                                  | x     |      |     |          |    |        |                            | x       |  |          |  |          |
| 6          |          | 678      | 30                | ✓ 30               | x                                  | x     |      |     |          |    |        |                            | x       |  |          |  |          |
| 7          |          | 679      | 20                | ✓ 20               | x                                  | x     |      | x   |          |    |        |                            | xx      |  |          |  |          |
| 8          |          | 680      | 10                | ✓ 10               | x                                  | x     |      | xx  |          |    |        |                            | x       |  |          |  |          |
| 9          |          | 681      | 5                 | ✓ 5                | x                                  | x     |      | x   |          |    |        |                            | x       |  |          |  |          |
| 10         |          | 682      | 0                 |                    | x                                  | x     |      | x   | xx       | x  | x      |                            | x       |  |          |  |          |
| 11         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            | 1       |  |          |  |          |
| 12         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            | 2x HgCl |  |          |  |          |
| 13         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 14         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 15         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 16         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 17         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 18         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 19         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 20         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 21         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 22         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 23         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |
| 24         |          |          |                   |                    |                                    |       |      |     |          |    |        |                            |         |  |          |  |          |

Profile type:

ROS TRM X-Niskin other?

Watchkeeper(s):

SR

Bottom Depth: 112 m

Transmisso Cleaned: (Y) N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 15 22 | 0822  |
| Bottom | 1525  |       |
| End    | 1534  |       |

Positional Information

|       |                    |
|-------|--------------------|
| Start | Lat: 49° 18.898 N  |
|       | Lon: 123° 15.806 W |

|        |                    |
|--------|--------------------|
| Bottom | Lat: 49° 18.901 N  |
|        | Lon: 123° 15.864 W |

|     |                    |
|-----|--------------------|
| End | Lat: 49° 18.931 N  |
|     | Lon: 123° 16.002 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |     |  |  |  |  | Comments    |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |  |  |             |
| 1        | 1        | 683      | 20                | ✓ 20                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |             |
| 2        | 2        | 684      | 10                | ✓ 10                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |             |
| 3        | 3        | 685      | 5                 | ✓ 5                  |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |             |
| 4        | 4        | 686      | 0                 | ✓ 0                  |                                    | x     |     | x   | xx   |    |                            |     |  |  |  |  | Fluoro: 4.9 |
| 5        |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 6        |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 7        |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 8        |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 9        |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 10       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 11       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 12       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 13       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 14       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 15       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 16       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 17       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 18       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 19       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 20       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 21       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 22       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 23       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |
| 24       |          |          |                   |                      |                                    |       |     |     |      |    |                            |     |  |  |  |  |             |

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

Watchkeeper(s): SR + GC

Bottom Depth: 377 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1836 | 1136  |
| Bottom | 1843 |       |
| End    | 1853 |       |

Positional Information

Start

Lat: 49 ° 9.850 N  
Lon: 123 ° 32.890 W

Bottom

Lat: 49 ° 09.850 N  
Lon: 123 ° 32.870 W

End

Lat: 49 ° 09.850 N  
Lon: 123 ° 32.850 W

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core Samples |        |     |  |  | Comments     |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|--|--------------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |  |              |
| 1        | 1        | 687      | Bot-105           | ✓ 316              | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 2        | 2        | 688      | 300               | ✓ 300              | x                                  | x     | x   |     |      |                            |        |     |  |  |              |
| 3        | 3        | 689      | 250               | ✓ 250              | xx                                 | x     |     |     |      |                            |        |     |  |  |              |
| 4        | 4        | 690      | 200               | ✓ 200              | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 5        | 5        | 691      | 175               | ✓ 175              | x                                  | xx    |     |     |      |                            |        |     |  |  |              |
| 6        | 6        | 692      | 150               | ✓ 150              | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 7        | 7        | 693      | 125               | ✓ 125              | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 8        | 8        | 694      | 100               | ✓ 100              | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 9        | 9        | 695      | 75                | ✓ 75               | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 10       | 10       | 696      | 50                | ✓ 50               | x                                  | x     |     |     |      |                            |        |     |  |  |              |
| 11       | 11       | 697      | 30                | ✓ 30               | x                                  | x     |     | xx  |      |                            |        |     |  |  |              |
| 12       | 12       | 698      | 20                | ✓ 20               | x                                  | x     |     | x   |      |                            |        |     |  |  |              |
| 13       | 13       | 699      | 10                | ✓ 10               | x                                  | x     |     | x   |      |                            |        |     |  |  |              |
| 14       | 14       | 700      | 5                 | ✓ 5                | xx                                 | x     | x   | x   |      |                            |        |     |  |  |              |
| 15       | 15       | 701      | 0                 | ✓ 0                | x                                  | xx    |     | x   | xx   | x                          | x      |     |  |  | Fluoro: 4.75 |
| 16       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 17       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 18       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 19       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 20       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 21       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 22       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 23       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |
| 24       |          |          |                   |                    |                                    |       |     |     |      |                            |        |     |  |  |              |

Profile type:  
ROS TRM X-Niskin other?

Watchkeeper(s): GC

Bottom Depth: 322 m

Transmisso Cleaned: ☒ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2033 | 1333  |
| Bottom | 2039 |       |
| End    | 2058 |       |

Positional Information

Start

Lat: 49 ° 01.680 N

Lon: 123 ° 26.110 W

Bottom

Lat: 49 ° 01.678 N

Lon: 123 ° 26.176 W

End

Lat: 49 ° 01.657 N

Lon: 123 ° 26.305 W

Extra comments:

Cruise ID: 2020-005

Station: 46

Event #: 290

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 11 | July | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |     |  |  | Comments |  |  |  |  |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|--|----------|--|--|--|--|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |  |          |  |  |  |  |
| 1        | 1        | 702      | 20                | ✓ 20                 |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |  |  |  |
| 2        | 2        | 703      | 10                | ✓ 10                 |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |  |  |  |
| 3        | 3        | 704      | 5                 | ✓ 5                  |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |  |  |  |
| 4        | 4        | 705      | 0                 | ✓                    |                                    | x     |     | x   | xx   |                            |        |     |  |  |          |  |  |  |  |
| 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: 180 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2300 | 1600  |
| Bottom | 2304 |       |
| End    | 2311 |       |

Positional Information

Start

Lat: 48 ° 51.392 N

Lon: 123 ° 10.876 W

▼

Bottom

Lat: 48 ° 51.398 N

Lon: 123 ° 10.888 W

▼

End

Lat: 48 ° 51.394 N

Lon: 123 ° 10.904 W

Extra comments:

## Water Properties Group

Program  
STN List:

SoG

## Sampling Log

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

Cruise ID:

2020-005

Station:

56

Event #:

291

Ship:

JP Tully

UTC Date (dd/mmm/yyyy): 12 July 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                    | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |     |  |  |  |  | Comments     |
|----------|----------|----------|-------------------|--------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|--|--|--------------|
|          |          |          | Target Pressure   | Confirmed Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |  |  |              |
| 1        | 1        | 706      | 20                | 20                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |              |
| 2        | 2        | 707      | 10                | 10                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |              |
| 3        | 3        | 708      | 5                 | 5                  |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |              |
| 4        | 4        | 709      | 0                 | 0                  |                                    | x     |     | x   | xx   | x  | x                          |     |  |  |  |  | Fluoro: 0.77 |
| 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): GLBottom Depth: 192 m  
Transmisso Cleaned: 0 / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0015 | 1715  |
| Bottom | 0019 |       |
| End    | 0026 |       |

Positional Information

|        |                     |
|--------|---------------------|
| Start  | Lat: 48 ° 46.800 N  |
|        | Lon: 123 ° 01.860 W |
| Bottom | Lat: 48 ° 46.830 N  |
|        | Lon: 123 ° 01.780 W |
| End    | Lat: 48 ° 46.980 N  |
|        | Lon: 123 ° 01.560 W |

Extra comments:

| Niskin # | Firing # | Sample # | Rosette Operation |                      | Sampler's Initials / Samples Taken |       |     |     |      | Sample Lists: Core_Samples |        |     |  |  | Comments |  |  |  |             |
|----------|----------|----------|-------------------|----------------------|------------------------------------|-------|-----|-----|------|----------------------------|--------|-----|--|--|----------|--|--|--|-------------|
|          |          |          | Target Pressure   | Confirmed ✓ Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA                         | Lugols | DIC |  |  |          |  |  |  |             |
| 1        | 1        | 710      | 20                | ✓ 20.                |                                    | x     |     | x   |      |                            |        |     |  |  |          |  |  |  |             |
| 2        | 2        | 711      | 10                | ✓ 10                 |                                    | x     |     | xx  |      |                            |        |     |  |  |          |  |  |  |             |
| 3        | 3        | 712      | 5                 | ✓ 5                  |                                    | xx    | x   | x   |      |                            |        |     |  |  |          |  |  |  |             |
| 4        | 4        | 713      | 0                 | ✓ 0.                 |                                    | x     |     | x   | xx   | x                          | x      |     |  |  |          |  |  |  | Fluoro: 4.8 |
| 5        |          |          | LOOP              |                      |                                    |       | x   | xx  |      |                            |        |     |  |  |          |  |  |  |             |
| 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: 92 m

Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0241 | 1941  |
| Bottom | 0245 |       |
| End    | 0250 |       |

Positional Information

StartLat: 48 ° 43.420 N

StartLon: 123 ° 24.970 W

BottomLat: 48 ° 43.400 N

BottomLon: 123 ° 24.960 W

EndLat: 48 ° 43.390 N

EndLon: 123 ° 24.980 W

Extra comments:

loop

Cruise ID: 2020-005

Station: 59

Event #: 285

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 12 | July | 2020

| Niskin # | Firing # | Sample # | Rosette Operation |                                                        | Sampler's Initials / Samples Taken |       |     |     |      |    | Sample Lists: Core_Samples |     |  |  |  |  | Comments |
|----------|----------|----------|-------------------|--------------------------------------------------------|------------------------------------|-------|-----|-----|------|----|----------------------------|-----|--|--|--|--|----------|
|          |          |          | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | OXY                                | Nut-F | SAL | CHL | HPLC | DA | Lugols                     | DIC |  |  |  |  |          |
| 1        | 1        | 714      | 20                | <input checked="" type="checkbox"/> 20                 |                                    | xx    |     | x   |      |    |                            |     |  |  |  |  |          |
| 2        | 2        | 715      | 10                | <input checked="" type="checkbox"/> 10                 |                                    | x     |     | x   |      |    |                            |     |  |  |  |  |          |
| 3        | 3        | 716      | 5                 | <input checked="" type="checkbox"/> 5                  |                                    | x     |     | xx  |      |    |                            |     |  |  |  |  |          |
| 4        | 4        | 717      | 0                 | <input checked="" type="checkbox"/> 0                  |                                    | x     |     | x   | xx   | x  | x                          |     |  |  |  |  |          |
| 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: 229 m

Transmisso Cleaned: ☒ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0450 | 2150  |
| Bottom | 0455 |       |
| End    | 0503 |       |

Positional Information

Lat: 48 ° 37.033 N

Lon: 123 ° 14.545 W

▼

Lat: 48 ° 37.115 N

Lon: 123 ° 14.509 W

▼

Lat: 48 ° 37.266 N

Lon: 123 ° 14.537 W

Extra comments: