

Water Properties Group

Rosette Log

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

Cruise ID: 2008-27 Station: SIO3 Event #: 1 Ship: TULLY UTC Date (dd|mmm|yyyy): 13 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |             |          | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments                                    |
|----------|----------|-------------------|----------------------------|-------------------|-------------|----------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|---------------------------------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed √ | Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                                             |
| 1        | 1        | 690               | -0.013                     | Bot-10            | ✓           | 214      | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  | Particle float MATE floating BOT Depth 222m |
| 2        | 2        | 1175              | -0.017                     | 200               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 3        | 3        | 1176              | -0.025                     | 175               | ✓           |          |               | ✓   |     |       |                 |  |  |  |  |  |                                             |
| 4        | 4        | 1146              | 0.022                      | 150               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 5        | 5        | 1180              | 0.481                      | 125               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| * 6      | 6        | 1414              | 0.735                      | 100               | ✓           |          |               |     |     |       |                 |  |  |  |  |  | Colp mtd. 16.7 Went above scale             |
| 7        | 7        | 1106              | 1.605                      | 75                | ✓           |          |               | 1   |     |       |                 |  |  |  |  |  | over 101 → (.29m 1)                         |
| 8        | 8        | 1144              | 2.956                      | 50                | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 9        | 9        | 1213              | 3.875                      | 25                | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 10       | 10       | 1315              | 5.214                      | 10                | ✓           |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 11       | 11       | 1317              | 6.763                      | 5                 | ✓           |          | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  | Particles in Sample                         |
| 12       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 13       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 14       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 15       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 16       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 17       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 18       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 19       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 20       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 21       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 22       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 23       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |
| 24       |          |                   |                            |                   |             |          |               |     |     |       |                 |  |  |  |  |  |                                             |

Watchkeeper(s): MD

Bottom Depth: 222 m  
Transmisso Cleaned: (Y) / N

|            | UTC  | Local |
|------------|------|-------|
| Time Start | 1728 | 1028  |
| Bottom     | 1734 | 1034  |
| End        | 1750 | 1050  |

Positional Information  
Start  
Lat: 48 ° 35' 36" N  
Lon: 123 ° 29.97' W

Bottom  
Lat: 48 ° 35.58' N  
Lon: 123 ° 30.04' W

End  
Lat: 48 ° 35.59' N  
Lon: 123 ° 30.13' W

Oxygen Info For This Cast  
Blank Value: 0.006 mL · L<sup>-1</sup>  
Std Value: 0.74333 mL · L<sup>-1</sup>  
\*Date Run: 14 | 08 | 08  
Analyst: RL

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P2

Event #: 5

Ship: TULLY

UTC Date (dd|mmm|yyyy): 14 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                 |  |  |  | Comments                       |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|-----------------|--|--|--|--------------------------------|
|          |          | Flask Serial #    | Value mL • L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |                                |
| 1        | 13       | 632               | 1.134                      | Bot-10            | ✓                  | ✓             | ✓   | ✓   |       |                 |  |  |  |                                |
| 2        | 14       | 76                | 1.213                      | 100               | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |                                |
| 3        | 15       | 329               | 2.782                      | 75                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |                                |
| 4        | 16       | 425               | 2.833                      | 75                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |                                |
| 5        | 17       | 371               | 2.629                      | 50                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  | wrong depth for oxy called 25m |
| 6        | 18       | 439               | 3.652                      | 25                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |                                |
| 7        | 19       |                   |                            | 10                | ✓                  |               |     |     |       |                 |  |  |  |                                |
| 8        | 20       |                   |                            | 10                | ✓                  |               |     |     |       |                 |  |  |  |                                |
| 9        | 21       |                   |                            | 10                | ✓                  |               |     |     |       |                 |  |  |  |                                |
| 10       | 22       |                   |                            | 10                | ✓                  |               |     |     |       |                 |  |  |  |                                |
| 11       | 23       | 557               | 4.817                      | 10                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  | called sample 19 oxy           |
| 12       | 24       | 2040              | 5.866                      | 5                 | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |                                |
| 13       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 14       | 17       | 1338              | 2.703                      | 50m               |                    |               |     |     |       |                 |  |  |  | Duplicate                      |
| 15       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 16       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 17       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 18       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 19       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 20       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 21       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 22       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 23       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |
| 24       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |                                |

Watchkeeper(s): MD DG KG

Bottom Depth: 115 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1410 | 0710  |
| Bottom | 1412 | 0712  |
| End    | 1421 | 0721  |

| Positional Information |                  |   |  |
|------------------------|------------------|---|--|
| Start                  | Lat: 48 ° 35.96  | N |  |
|                        | Lon: 125 ° 59.97 | W |  |

|        |                  |   |  |
|--------|------------------|---|--|
| Bottom | Lat: 48 ° 35.96  | N |  |
|        | Lon: 125 ° 59.98 | W |  |

|     |                  |   |  |
|-----|------------------|---|--|
| End | Lat: 48 ° 35.97  | N |  |
|     | Lon: 126 ° 00.01 | W |  |

| Oxygen Info For This Cast |                                    |
|---------------------------|------------------------------------|
| Blank Value:              | <u>10.06</u> mL • L <sup>-1</sup>  |
| Std Value:                | <u>0.7433</u> mL • L <sup>-1</sup> |
| *Date Run:                | <u>15/08/08</u>                    |
| Analyst:                  | <u>MD</u>                          |

\* Oxygen blanks and standards should be run daily, if possible

OXY: GREEN BOX

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P4

Event #: 11

Ship: TULLY

UTC Date (dd|mmm|yyyy): 14 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                     |    |                 |     |    |  | Comments                 |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|---------------------|----|-----------------|-----|----|--|--------------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> DIC | pH | Go <sub>2</sub> | FCM | HR |  |                          |
| 1        | 26       | 1456              | 0.542                      | Bot-10            | ✓ 1315             | ✓             | ✓   | ✓   |       | ✓                   | ✓  |                 |     |    |  |                          |
| 2        | 27       | 1354              | 0.417                      | 1250              | ✓                  |               |     |     |       | ✓                   |    |                 |     |    |  |                          |
| 3        | 28       | 1340              | 0.436                      | 1250              | ✓                  |               |     |     |       | ✓                   |    |                 |     |    |  |                          |
| 4        | 29       | 1341              | 0.242                      | 1000              | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 5        | 30       | 1344              | 0.255                      | 800               | ✓                  |               |     |     |       |                     | ✓  |                 |     |    |  | -check depth in oxy file |
| 6        | 31       | 1347              | 0.471                      | 600               | ✓                  |               | ✓   |     |       |                     |    |                 |     |    |  |                          |
| 7        | 32       | 1351              | 0.979                      | 400               | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 8        | 33       | 1212              | 1.362                      | 300               | ✓                  |               |     | ✓   |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 9        | 34       | 1356              | 1.757                      | 250               | ✓                  |               |     |     |       |                     |    |                 |     |    |  |                          |
| 10       | 35       | 1358              | 1.979                      | 200               | ✓                  | ✓             |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 11       | 36       | 1360              | 2.235                      | 175               | ✓                  |               |     |     |       |                     |    |                 |     |    |  |                          |
| 12       | 37       | 1361              | 2.722                      | 150               | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 13       | 38       | —                 | —                          | 125               | ✓                  |               |     |     |       |                     |    |                 |     |    |  | "Did not close"          |
| 14       | 39       | 1363              | 3.765                      | 100               | ✓                  |               | ✓   |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 15       | 40       | 1364              | 5.425                      | 75                | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 16       | 41       | 1366              | 6.371                      | 50                | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 17       | 42       | 1110              | 6.550                      | 25                | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 18       | 43       | 1150              | 6.360                      | 10                | ✓                  |               |     |     |       |                     |    | ✓               | ✓   | ✓  |  |                          |
| 19       | 44       | 1223              | 6.311                      | 5                 | ✓                  |               |     |     |       |                     |    |                 |     |    |  |                          |
| 20       |          |                   |                            |                   |                    |               |     |     |       |                     |    |                 |     |    |  |                          |
| 21       |          |                   |                            |                   |                    |               |     |     |       |                     |    |                 |     |    |  |                          |
| 22       | 35       | 1327              | 2.032                      | 700               |                    |               |     |     |       |                     |    |                 |     |    |  | bottle 10 dup            |
| 23       |          |                   |                            |                   |                    |               |     |     |       |                     |    |                 |     |    |  |                          |
| 24       |          |                   |                            |                   |                    |               |     |     |       |                     |    |                 |     |    |  |                          |

Watchkeeper(s): R G Day

Bottom Depth: 1310 m

Transmisso Cleaned: Y / N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 19:24 | 12:24 |
| Bottom |      | 19:44 | 12:44 |
| End    |      | 20:22 | 01:22 |

| Positional Information |      |            |   |
|------------------------|------|------------|---|
| Start                  | Lat: | 48° 37.10  | N |
|                        | Lon: | 126° 44.48 | W |

|        |      |            |   |
|--------|------|------------|---|
| Bottom | Lat: | 48° 39.01  | N |
|        | Lon: | 126° 39.97 | W |

|     |      |            |   |
|-----|------|------------|---|
| End | Lat: | 48° 38.93  | N |
|     | Lon: | 126° 39.94 | W |

| Oxygen Info For This Cast |                                    |
|---------------------------|------------------------------------|
| Blank Value:              | <u>.006</u> mL · L <sup>-1</sup>   |
| Std Value:                | <u>0.7433</u> mL · L <sup>-1</sup> |
| *Date Run:                | <u>15   08   08</u>                |
| Analyst:                  | <u>MD</u>                          |

\*Oxygen blanks and standards should be run daily, if possible

## Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27Station: P4Event #: 13Ship: TULLYUTC Date (dd|mmm|yyyy): 14 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                 |      |     |      |     |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|-----------------|------|-----|------|-----|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | HPLC | DRP | DMSP | Phy |  |          |
| 1        | 45       |                   |                            | 300               | ✓ 300              |               |     |     |       |                 |      |     |      |     |  | UVIC     |
| 2        | 46       |                   |                            | 200               | ✓                  | ✓             | ✓✓✓ |     |       |                 |      | ✓✓  | ✓✓   |     |  |          |
| 3        | 47       |                   |                            | 175               | ✓                  | ✓             | ✓✓  |     |       |                 |      | ✓✓  | ✓✓   |     |  |          |
| 4        | 48       |                   |                            | 150               | ✓                  |               |     |     |       |                 |      |     |      |     |  | UVIC     |
| 5        | 49       |                   |                            | 100               | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      | ✓✓  | ✓✓   |     |  |          |
| 6        | 50       |                   |                            | 75                | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      |     |      |     |  |          |
| 7        | 51       |                   |                            | 75                | ✓                  |               |     |     |       |                 |      |     |      |     |  | UVIC     |
| 8        | 52       |                   |                            | 50                | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      |     |      |     |  |          |
| 9        | 53       |                   |                            | 40                | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      |     |      |     |  |          |
| 10       | 54       |                   |                            | 40                | ✓                  |               |     |     |       |                 |      |     |      |     |  | } UVIC   |
| 11       | 55       |                   |                            | 30                | ✓                  |               |     |     |       |                 |      |     |      |     |  |          |
| 12       | 56       |                   |                            | 30                | ✓                  |               |     |     |       |                 |      |     |      |     |  | } OSU    |
| 13       | 57       |                   |                            | 30                | ✓                  |               |     |     |       |                 |      |     |      |     |  |          |
| 14       | 58       |                   |                            | 30                | ✓                  | ✓             | ✓✓✓ |     | ✓     |                 |      |     |      |     |  |          |
| 15       | 59       |                   |                            | 25                | ✓                  | ✓             | ✓✓  |     | ✓     |                 | ✓✓   |     |      |     |  |          |
| 16       | 60       |                   |                            | 20                | ✓                  | ✓✓            | ✓✓  |     | ✓     |                 |      | ✓✓  | ✓✓   |     |  |          |
| 17       | 61       |                   |                            | 15                | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      |     |      |     |  |          |
| 18       | 62       |                   |                            | 10                | ✓                  | ✓             | ✓✓  |     | ✓     |                 | ✓✓   |     |      |     |  |          |
| 19       | 63       |                   |                            | 5                 | ✓                  | ✓             | ✓✓  |     | ✓✓    |                 | ✓✓   | ✓✓  | ✓✓   | ✓✓✓ |  |          |
| 20       | 64       |                   |                            | 5                 | ✓                  |               |     |     |       |                 |      |     |      |     |  | } OSU    |
| 21       | 65       |                   |                            | 5                 | ✓                  |               |     |     |       |                 |      |     |      |     |  |          |
| 22       | 66       |                   |                            | 5                 | ✓                  |               |     |     |       |                 |      |     |      |     |  | ONAR     |
| 23       | 67       |                   |                            | 0                 | ✓                  | ✓             | ✓✓  |     | ✓     |                 |      | ✓✓  | ✓✓   |     |  |          |
| 24       |          |                   |                            |                   |                    |               |     |     |       |                 |      |     |      |     |  |          |

Watchkeeper(s): Ran L.Bottom Depth: 1322 mTransmissio Cleaned: Y / N

| Time   | UTC    | Local   |
|--------|--------|---------|
| Start  | 214207 | 14:4207 |
| Bottom | 214800 | 14:4800 |
| End    | 221239 | 15:1239 |

## Positional Information

|       |                          |          |
|-------|--------------------------|----------|
| Start | Lat: <u>48 ° 38.928</u>  | <u>N</u> |
|       | Lon: <u>126 ° 40.098</u> | <u>W</u> |

|        |                          |          |
|--------|--------------------------|----------|
| Bottom | Lat: <u>48 ° 38.995</u>  | <u>N</u> |
|        | Lon: <u>126 ° 39.997</u> | <u>W</u> |

|     |                          |          |
|-----|--------------------------|----------|
| End | Lat: <u>48 ° 39.008</u>  | <u>N</u> |
|     | Lon: <u>126 ° 40.000</u> | <u>W</u> |

## Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_|\_\_\_\_|\_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P4

Event #: 14

Ship: TULLY

UTC Date (dd|mmm|yyyy): 14 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed √ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 68       |                   |                            | 1300              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 2        | 69       |                   |                            | 1300              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 70       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 71       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 72       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 73       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 74       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 75       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 76       |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 77       |                   |                            | 1300              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 78       |                   |                            | 1300              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 79       |                   |                            | 1300              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 80       |                   |                            | 500               |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 81       |                   |                            | 500               |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 82       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 83       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 84       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 85       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 86       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 20       | 87       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 21       | 88       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 22       | 89       |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 23       | 90       |                   |                            | 500               |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 24       | 91       |                   |                            | 500               |                      |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): Ron Lindsay

Bottom Depth: 1330 m

Transmisso Cleaned: Y N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 23:15 | 16:22 |
| Bottom |      | 23:33 | 16:33 |
| End    |      | 23:56 |       |

Positional Information

Start

Lat: 48° 38' 870 N

Lon: 126° 40.060 W

Bottom

Lat: 48° 38' 870 N

Lon: 48° 38' 986 W

End

Lat: 48° 38' 993 N

Lon: 126° 40.061 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\*Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P4

Event #: 16

Ship: TULLY

UTC Date (dd|mmm|yyyy): 15 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |     |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|-----|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | Dis |  |  |  |  |          |
| 1        | 92       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  | UVIC     |
| 2        | 93       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 3        | 94       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 4        | 95       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 5        | 96       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 6        | 97       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 7        | 98       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 8        | 99       |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 9        | 100      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 10       | 101      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 11       | 102      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 12       | 103      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 13       | 104      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 14       | 105      |                   |                            | 750               | ✓                    |               |     |     |       |                 | ✓   |  |  |  |  | CSU      |
| 15       | 106      |                   |                            | 300               | ✓                    |               |     |     |       |                 | ✓   |  |  |  |  | CSU      |
| 16       | 107      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 17       | 108      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 18       | 109      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 19       | 110      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 24       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |

Watchkeeper(s): Ron Hudson

Bottom Depth: 1323 m

Transmisso Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0240 | 19:40 |
| Bottom | 0255 | 19:55 |
| End    | 0316 |       |

Positional Information

Start Lat: 48° 38.94 N

Lon: 126° 39.99 W

Bottom Lat: 48° 38.98 N

Lon: 126° 40.01 W

End Lat: 48° 39.927 N

Lon: 126° 40.097 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: PG

Event #: 20

Ship: Tolly

UTC Date (dd|mmm|yyyy): 15 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments       |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                |
| 1        | 112      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  | } UVIC (Dowry) |
| 2        | 113      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 3        | 114      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 4        | 115      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 5        | 116      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 6        | 117      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 7        | 118      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 8        | 119      |                   |                            | 600               |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 9        | 120      |                   |                            | 5                 |                                                        |               | ✓✓  | ✓   | ✓     |                 |  |  |  |  |  |                |
| 10       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 11       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 12       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 13       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 14       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 15       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 16       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 17       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 18       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |                |

Watchkeeper(s): MD

Bottom Depth: 2546 m

Transmisso Cleaned: ☒ Y / ☐ N

|        | Time | UTC  | Local |
|--------|------|------|-------|
| Start  |      | 1016 | 0316  |
| Bottom |      | 1040 | 0340  |
| End    |      | 1108 | 408   |

Positional Information

Start

Lat: 48 ° 44 528 N

Lon: 127 ° 39 952 W

Bottom

Lat: 48 ° 44 599 N

Lon: 127 ° 39 997 W

End

Lat: 48 ° 44 467 N

Lon: 127 ° 40 421 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-22

Station: P8

Event #: 24

Ship: TULLY

UTC Date (dd|mmm|yyyy): 15 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |     |  |  |  |  | Comments                           |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|-----|--|--|--|--|------------------------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | DMS |  |  |  |  |                                    |
| 1        | 122      | 632               | 1.335                      | 2000              | ✓                    |               | ✓   | ✓   |       |                 |     |  |  |  |  | abort - start OXY again            |
| 2        | 123      | 76                | 0.606                      | 1500              | ✓                    |               | ✓   |     |       |                 |     |  |  |  |  | line above graph?                  |
| 3        | 124      | 329               | 0.420                      | 1250              | ✓                    |               |     | ✓   |       |                 |     |  |  |  |  | looked O.K.                        |
| 4        | 125      | 425               | -0.013                     | 1000              | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 5        | 126      | 371               | 0.001                      | 800               | ✓                    |               |     |     |       |                 |     |  |  |  |  | oxy Sample #5.1                    |
| 6        | 127      | 439               | 0.022                      | 600               | ✓                    |               |     | ✓   |       |                 |     |  |  |  |  | oxy Sample #6.1                    |
| 7        | 128      | 456               | 1.385                      | 400               | ✓                    |               | ✓   |     |       |                 |     |  |  |  |  | oxy Entered as Sample 7            |
| 8        | 129      | 462               | 2.468                      | 300               | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 9        | 130      | 547               | 3.031                      | 250               | ✓                    | ✓             |     |     |       |                 |     |  |  |  |  |                                    |
| 10       | 131      | 477               | 3.378                      | 200               | ✓                    |               | ✓   |     |       |                 |     |  |  |  |  |                                    |
| 11       | 132      | 557               | 3.712                      | 175               | ✓                    |               |     |     |       |                 |     |  |  |  |  | oxy Entered as 133                 |
| 12       | 133      | 2040              | 4.158                      | 150               | ✓                    |               |     |     |       |                 |     |  |  |  |  | oxy Entered as 132                 |
| 13       | 134      | 559               | 4.986                      | 125               | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 14       | 135      | 575               | 6.028                      | 100               | ✓                    |               |     |     | ✓     |                 |     |  |  |  |  | gd curve                           |
| 15       | 136      |                   |                            | 75                | ✓                    |               |     |     | ✓     |                 |     |  |  |  |  | SD10 NOT CLOSE                     |
| 16       | 137      | 589               | 5.124                      | 50                | ✓                    |               |     |     | ✓     |                 |     |  |  |  |  | oxy Entered # 13.7 + Flask as 589D |
| 17       | 138      | 1158              | 4.173                      | 25                | ✓                    |               |     |     | ✓     |                 |     |  |  |  |  | P6m Crashed.                       |
| 18       | 139      | 605               | 6.178                      | 10                | ✓                    | ✓             | ✓   | ✓   | ✓     |                 | ✓   |  |  |  |  | gd curve.                          |
| 19       | 140      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 20       | 141      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 21       | 142      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 22       | 143      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |                                    |
| 23       | 144      | 622               | 6.143                      | 5                 | ✓                    | ✓             | ✓   | ✓   | ✓     |                 |     |  |  |  |  | particles in flask                 |
| 24       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |                                    |

Watchkeeper(s): DS RG MD

Bottom Depth: 2519 m

Transmissio Cleaned: Y N

|        | UTC  | Local |
|--------|------|-------|
| Start  | 1745 | 1045  |
| Bottom | 1817 | 1117  |
| End    | 1905 | 1205  |

Positional Information

Start

Lat: 48 ° 48.929 N

Lon: 128 ° 39.905 W

Bottom

Lat: 48 ° 48.989 N

Lon: 128 ° 40.003 W

End

Lat: 48 ° 48.757 N

Lon: 128 ° 40.628 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008

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

<http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>

NOTE: SAMPLE 1131 is Duplicate BOT. 9. FLASK 1375 Value 3.028 - Depth entered incorrect, should be 250 m.

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27 Station: P12 Event #: 36 Ship: Tully UTC Date (dd|mmm|yyyy): 16 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 148      |                   |                            | 2000              |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 2        | 149      |                   |                            | 2000              |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 150      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 151      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 152      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 153      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 154      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 155      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 156      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 157      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 158      |                   |                            | 2000              |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 159      |                   |                            | 2000              |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 160      |                   |                            | 500               |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 161      |                   |                            | 500               |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 162      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 163      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 164      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 165      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 166      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 20       | 167      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 21       | 168      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 22       | 169      |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 23       | 170      |                   |                            | 500               |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 24       | 171      |                   |                            | 500               |                                                        |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): MD SG KG

Bottom Depth: 3114 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1321 | 621   |
| Bottom | 1348 | 628   |
| End    | 1417 | 0717  |

Positional Information

Start

Lat: 48 ° 58 184 N

Lon: 130 ° 39 941 W

Bottom

Lat: 48 ° 58 196 N

Lon: 130 ° 39 980 W

End

Lat: 48 ° 58 22 N

Lon: 130 ° 39 998 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P12

Event #: 37

Ship: J.P. Tully

UTC Date (dd|mmm|yyyy): 16 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |      |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|------|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | diss |  |  |  |  |          |
| 1        | 172      |                   |                            | 1000              | ✓                                                      |               |     | ✓   |       |                 |      |  |  |  |  |          |
| 2        | 173      |                   |                            | 1000              | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 3        | 174      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 4        | 175      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 5        | 176      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 6        | 177      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 7        | 178      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 8        | 179      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 9        | 180      |                   |                            |                   | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 10       | 181      |                   |                            | ✓                 | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 11       | 182      |                   |                            | 1000              | ✓                                                      |               |     |     |       |                 |      |  |  |  |  |          |
| 12       | 183      |                   |                            | 1000              | ✓                                                      |               |     | ✓   |       |                 |      |  |  |  |  |          |
| 13       | 184      |                   |                            | 750               | ✓                                                      |               |     |     |       |                 | ✓    |  |  |  |  | CSU      |
| 14       | 185      |                   |                            | 300               | ✓                                                      |               |     |     |       |                 | ✓    |  |  |  |  | CSU      |
| 15       | 186      |                   |                            | 150               | ✓                                                      |               |     |     |       |                 |      |  |  |  |  | JANET    |
| 16       | 187      |                   |                            | 10                |                                                        |               |     | ✓   |       |                 |      |  |  |  |  |          |
| 17       | 188      |                   |                            | 10                |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 18       | 189      |                   |                            | 10                |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 19       | 190      |                   |                            | 10                |                                                        |               |     | ✓   |       |                 |      |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |      |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |      |  |  |  |  |          |

Watchkeeper(s): kg Dg Md

Bottom Depth: 3114 m

Transmisso Cleaned: ☒ Y / ☐ N

|        | Time | UTC  | Local |
|--------|------|------|-------|
| Start  |      | 1458 | 0758  |
| Bottom |      | 1510 | 0810  |
| End    |      | 1530 | 0830  |

Positional Information

Start

Lat: 48 ° 58 196 N

Lon: 130 ° 39 980 W

Bottom

Lat: 48 ° 58 18 N

Lon: 130 ° 39 98 W

End

Lat: 48 ° 58 205 N

Lon: 130 ° 39 895 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

③ DEEP CAST

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P12

Event #: 38

Ship: J. P. TULLY

UTC Date (dd|mmm|yyyy): 16 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |         |    |     |       |    |   | Comments                     |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|---------|----|-----|-------|----|---|------------------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | AMH DIC | PH | FCM | Gases | HR |   |                              |
| 1        | 191      | 638               | 2.325                      | Bot-10            | ✓ 3275             | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | Depth Entered 3215           |
| 2        | 192      | 647               | 2.274                      | 3000              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 3        | 193      | 657               | 2.270                      | 3000              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 4        | 194      | 639               | 1.911                      | 2500              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 5        | 195      | 700               | ✓                          | 2000              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | Color 185.0                  |
| 6        | 196      | 712               | 0.585                      | 1500              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | 91.5                         |
| 7        | 197      | 1174              | 0.327                      | 1250              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | 91.0                         |
| 8        | 198      | 1105              | 0.244                      | 1000              | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | 93.6                         |
| 9        | 199      | 1333              | 0.332                      | 800               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | 91.5                         |
| 10       | 200      | 1487              | 0.475                      | 600               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 11       | 201      | 715               | 1.225                      | 400               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 12       | 202      | 1374              | 2.589                      | 300               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 13       | 203      | 1301              | 3.853                      | 250               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 14       | 204      | 1302              | 4.500                      | 200               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 15       | 205      | 1306              | 4.778                      | 175               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 16       | 206      | 1321              | 6.176                      | 150               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 17       | 207      | 1367              | 6.162                      | 125               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ | Sample 14.0 Depth marked 200 |
| 18       | 208      | 1368              | 6.746                      | 100               | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 19       | 209      | 1365              | 6.893                      | 75                | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 20       | 210      | 1309              | 7.024                      | 50                | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 21       | 211      | 1328              | 6.551                      | 25                | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 22       | 212      | 1452              | 6.478                      | 10                | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 23       | 213      | 1448              | 6.323                      | 5                 | ✓                  | ✓             | ✓   | ✓   | ✓     | ✓       | ✓  | ✓   | ✓     | ✓  | ✓ |                              |
| 24       | 14.2     | 1327              | 4.055                      |                   |                    |               |     |     |       |         |    |     |       |    |   | DUP FOR 14 See               |

Watchkeeper(s):  
MD KG DG

Bottom Depth: 3224 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1614 | 914   |
| Bottom | 1702 | 1030  |
| End    | 1804 | 1104  |

Positional Information

Start Lat: 48 ° 58 192 N  
Lon: 130 ° 39 965 W

Bottom Lat: 48 ° 58 204 N  
Lon: 130 ° 40 010 W

End Lat: 48 ° 58 193 N  
Lon: 130 ° 39 913 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\*Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008

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

OXY white

Notes

<http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>

OXY DUP.  
#1367 Flask Dup 14.0

(OXY FLASK MARKED 17)

## Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27Station: P12Event #: 39Ship: J.P. TULLYUTC Date (dd|mmm|yyyy): 16 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-----|-------------------------------------|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy DMS                             | Nut                                 | Sal | Chl a                               | NH <sub>4</sub> | HPLC                                | DMS <sub>P1</sub>                   | DMS <sub>P2</sub>                   |  |  |          |
| 1        | 214      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | UVIC     |
| 2        | 215      |                   |                            | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                 |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 3        | 216      |                   |                            | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                 |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 4        | 217      |                   |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | UVIC     |
| 5        | 218      |                   |                            | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 6        | 219      |                   |                            | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |  |  |          |
| 7        | 220      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | UVIC     |
| 8        | 221      |                   |                            | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |  |  |          |
| 9        | 222      |                   |                            | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |  |  |          |
| 10       | 223      |                   |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | UVIC     |
| 11       | 224      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | } OSU    |
| 12       | 225      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  |          |
| 13       | 226      |                   |                            | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |  |  |          |
| 14       | 227      |                   |                            | 25                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> |                                     |                                     |  |  |          |
| 15       | 228      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | UVIC     |
| 16       | 229      |                   |                            | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 17       | 230      |                   |                            | 15                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |  |  |          |
| 18       | 231      |                   |                            | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> |                                     |                                     |  |  |          |
| 19       | 232      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | } OSU    |
| 20       | 233      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  |          |
| 21       | 234      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  | ONAR     |
| 22       | 235      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 23       | 236      |                   |                            | 0                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |          |
| 24       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |  |  |          |

Watchkeeper(s):

RonkBottom Depth: 3227 mTransmisso Cleaned: Y / N

Time UTC Local

Start 1915 1217Bottom 1920 1220End 1942 1242

Positional Information

Start Lat: 48° 58' 20" N  
Lon: 130° 40' 02" WBottom Lat: 48° 58.25' N  
Lon: 130° 40.00' WEnd Lat: 48° 58.27' N  
Lon: 130° 40.03' W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2008-27 Station: P14 Event #: 44 Ship: J.P. TULLY UTC Date (dd|mmm|yyyy): 17 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        |  | Samples Taken |     |     |       |                 |     |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|--|---------------|-----|-----|-------|-----------------|-----|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure |  | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | DMS |  |  |  |  |          |
| 1        | 238      |                   |                            | 10                |                                                        |  |               |     |     |       |                 |     |  |  |  |  | } UBC    |
| 2        | 239      |                   |                            | 10                |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 3        | 240      |                   |                            | 10                |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 4        | 241      |                   |                            | 10                |                                                        |  |               | ✓   | ✓   | ✓     |                 | ✓   |  |  |  |  |          |
| 5        | 242      |                   |                            | 5                 |                                                        |  |               | ✓✓  | ✓   | ✓     |                 |     |  |  |  |  |          |
| 6        |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 7        |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 8        |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 9        |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 10       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 11       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 12       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 13       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 14       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 15       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 16       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |  |               |     |     |       |                 |     |  |  |  |  |          |

Watchkeeper(s): MD

Bottom Depth: 3310 m

Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 0712 | 0012  |
| Bottom | 0737 | 0037  |
| End    | 0759 | 0059  |

Positional Information

Start Lat: 49 ° 07 409 N  
Lon: 132 ° 39 965 W

Bottom Lat: 49 ° 07 523 N  
Lon: 132 ° 40 050 W

End Lat: 49 ° 07 648 N  
Lon: 132 ° 40 069 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27 Station: P16 Event #: 50 Ship: J.P. TULLY UTC Date (dd|mmm|yyyy): 17 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |     |                                     |                                     |                                     |                                     |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                 | Nut                                 | Sal | Chl a                               | NH <sub>4</sub> HPLC                | DMSO 2                              | DMSO 6                              |  |          |
| 1        | 244      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | UVIC     |
| 2        | 245      |                   |                            | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 3        | 246      |                   |                            | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 4        | 247      |                   |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | UVIC     |
| 5        | 248      |                   |                            | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 6        | 249      |                   |                            | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 7        | 250      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | UVIC     |
| 8        | 251      |                   |                            | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 9        | 252      |                   |                            | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 10       | 253      |                   |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | UVIC     |
| 11       | 254      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | } OSU    |
| 12       | 255      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |          |
| 13       | 256      |                   |                            | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 14       | 257      |                   |                            | 25                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |  |          |
| 15       | 258      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | UVIC     |
| 16       | 259      |                   |                            | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 17       | 260      |                   |                            | 15                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 18       | 261      |                   |                            | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |  |          |
| 19       | 262      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  | } OSU    |
| 20       | 263      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |          |
| 21       | 264      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 22       | 265      |                   |                            | 0                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 23       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                                     |                                     |                                     |  |          |
| 24       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                                     |                                     |                                     |  |          |

Watchkeeper(s): Ron, Tanya, Marc

Bottom Depth: 3621 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 2001 | 1301  |
| Bottom | 2005 | 1305  |
| End    | 2026 | 1326  |

Positional Information

Start

Lat: 49 ° 16 94 N

Lon: 134 ° 39 92 W

Bottom

Lat: 49 ° 16 93 N

Lon: 134 ° 39 89 W

End

Lat: 49 ° 16 99 N

Lon: 134 ° 39 97 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\*Oxygen blanks and standards should be run daily, if possible

0 UBC 2000 m cast

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P16

Event #: 51

Ship: J.P. Tully

UTC Date (dd|mmm|yyyy): 17 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |             |          | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|-------------|----------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ | Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 266      |                   |                            | 2000              | ✓           |          |               |     | 1   |       |                 |  |  |  |  |  |          |
| 2        | 267      |                   |                            | 2000              | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 268      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 269      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 270      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 271      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 272      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 273      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 274      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 275      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 276      |                   |                            | 2000              | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 277      |                   |                            | 2000              | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 279      |                   |                            | 500               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 279      |                   |                            | 500               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 280      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 281      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 282      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 283      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 284      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 20       | 285      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 21       | 286      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 22       | 287      |                   |                            |                   | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 23       | 288      |                   |                            | 500               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |
| 24       | 289      |                   |                            | 500               | ✓           |          |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): K. Widay

Bottom Depth: 3621 m

Transmisso Cleaned: (4) N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 2120  | 14:20 |
| Bottom | 2148  | 14:48 |
| End    | 22:20 | 15:48 |

Positional Information

Start

Lat: 49° 16.993 N

Lon: 134° 39.97 W

Bottom

Lat: 49° 16.97 N

Lon: 134° 40.01 W

End

Lat: 49° 16.96 N

Lon: 134° 39.94 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

## Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27 Station: P16 Event #: 52 Ship: J.P. TULLY UTC Date (dd|mmm|yyyy): 17 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |                                     |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|-------------------------------------|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | 25°                                 |  |  |  |  |          |
| 1        | 290      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 2        | 291      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 3        | 292      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 4        | 293      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 5        | 294      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 6        | 295      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 7        | 296      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 8        | 297      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 9        | 298      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 10       | 299      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 11       | 300      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 12       | 301      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 13       | 302      |                   |                            | 750               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | <input checked="" type="checkbox"/> |  |  |  |  |          |
| 14       | 303      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | <input checked="" type="checkbox"/> |  |  |  |  |          |
| 15       | 304      |                   |                            | 10                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 16       | 305      |                   |                            | 10                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 17       | 306      |                   |                            | 10                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 18       | 307      |                   |                            | 10                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |                                     |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |                                     |  |  |  |  |          |

Watchkeeper(s): RonkBottom Depth: 3622 mTransmisso Cleaned: ☒ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 22:58 | 18:58 |
| Bottom | 23:12 | 16:12 |
| End    | 23:32 | 16:32 |

## Positional Information

Start  
Lat: 49 ° 16.94 N  
Lon: 134 ° 39.96 WBottom  
Lat: 49 ° 16.98 N  
Lon: 134 ° 39.97 WEnd  
Lat: 49 ° 17.02 N  
Lon: 134 ° 39.95 W

## Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27 Station: P16 Event #: 53 Ship: J.P. TULLY UTC Date (dd|mmm|yyyy): 18 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                     |    |     |      |    |   | Comments         |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|---------------------|----|-----|------|----|---|------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | AM <sub>4</sub> DIC | PH | FCM | 6000 | HR |   |                  |
| 1        | 308      | 638               | 2.850                      | Bot-10            | ✓ 3685               | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ | end point 114.3% |
| 2        | 309      | 647               | 2.716                      | 3500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 3        | 310      | 657               | 2.501                      | 3000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 4        | 311      | 639               | 2.473                      | 3000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 5        | 312      | 700               | 1.973                      | 2500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 6        | 313      | 712               | 1.333                      | 2000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 7        | 314      | 1174              | 0.585                      | 1500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 8        | 315      | 1105              | 0.317                      | 1250              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 9        | 316      | 1333              | 0.344                      | 1000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 10       | 317      | 1487              | 0.416                      | 800               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 11       | 318      | 715               | 0.516                      | 600               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 12       | 319      | 1374              | 0.881                      | 400               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 13       | 320      | 1301              | 1.535                      | 300               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 14       | 321      | 1302              | 2.164                      | 250               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 15       | 322      | 1306              | 2.755                      | 200               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 16       | 323      | 1321              | 3.056                      | 175               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 17       | 324      | 1367              | 3.453                      | 150               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 18       | 325      | 1368              | 4.139                      | 125               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 19       | 326      | 1365              | 6.288                      | 100               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 20       | 327      | 1309              | 6.954                      | 75                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 21       | 328      | 1328              | 7.135                      | 50                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 22       | 329      | 1452              | 6.169                      | 25                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 23       | 330      | 1448              | 6.628                      | 10                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |
| 24       | 331      | 1327              | 6.659                      | 5                 | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓ |                  |

Watchkeeper(s): Ron L

Bottom Depth: 3621 m

Transmissio Cleaned: Y / N

|        | UTC   | Local |
|--------|-------|-------|
| Start  | 00:00 | 17:00 |
| Bottom | 00:52 | 17:52 |
| End    | 02:08 | 19:08 |

| Positional Information |             |   |
|------------------------|-------------|---|
| Lat:                   | 49 ° 17.04  | N |
| Lon:                   | 134 ° 39.95 | W |

Start

Bottom

End

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 17.03  | N |
| Lon: | 134 ° 40.07 | W |

|      |             |   |
|------|-------------|---|
| Lat: | 49 ° 17.04  | N |
| Lon: | 134 ° 39.98 | W |

| Oxygen Info For This Cast |                            |
|---------------------------|----------------------------|
| Blank Value:              | 0.006 mL · L <sup>-1</sup> |
| Std Value:                | 0.743 mL · L <sup>-1</sup> |
| *Date Run:                | 18   08   2008             |
| Analyst:                  | MD                         |

\* Oxygen blanks and standards should be run daily, if possible

Autag on Deep Sample  
oxy Duplicate sample 323 NISKIN 16 BOTTLE 1375 Oxy value 3.119  
WHITE BOX FOR OXY'S

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P18

Event #: 58

Ship: Tully

UTC Date (dd|mmm|yyyy): 18 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |     |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|-----|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | DMS |  |  |  |  |          |
| 1        | 333      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 2        | 334      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 3        | 335      |                   |                            | 10                | ✓                    |               |     |     |       |                 |     |  |  |  |  |          |
| 4        | 336      |                   |                            | 10                | ✓                    |               | ✓   | ✓   | ✓     |                 | ✓   |  |  |  |  |          |
| 5        | 337      |                   |                            | 5                 |                      |               | ✓   | ✓   | ✓     |                 |     |  |  |  |  |          |
| 6        |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 7        |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 8        |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 9        |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 10       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 11       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 12       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 13       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 14       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 15       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 16       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 17       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 18       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |
| 24       |          |                   |                            |                   |                      |               |     |     |       |                 |     |  |  |  |  |          |

Watchkeeper(s): DS KG MD

Bottom Depth: 3814 m

Transmissio Cleaned: Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1335 | 0635  |
| Bottom | 1400 | 0700  |
| End    | 1420 | 720   |

Positional Information

Start

Lat: 49 ° 26.01 N

Lon: 136 ° 40.01 W

Bottom

Lat: 49 ° 25.93 N

Lon: 136 ° 40.03 W

End

Lat: 49 ° 26.02 N

Lon: 136 ° 40.05 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

① DMS CAST

Water Properties Group

Rosette Log

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

Cruise ID: 2008-22 Station: P20 Event #: 62 Ship: J.P. Tully UTC Date (dd|mmm|yyyy): 19 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |     |                                     |                                     |                                     |                                     |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|--|--|----------|
|          |          | Flask Serial #    | Value mL • L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | <del>Oxy</del> DMS                  | Nut                                 | Sal | Chl a                               | NH <sub>4</sub> HPLC                | DHSP                                | DHSP                                |  |  |  |          |
| 1        | 339      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | UVIC     |
| 2        | 340      |                   |                            | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 3        | 341      |                   |                            | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 4        | 342      |                   |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | UVIC     |
| 5        | 343      |                   |                            | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 6        | 344      |                   |                            | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |  |  |          |
| 7        | 345      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | UVIC     |
| 8        | 346      |                   |                            | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |  |  |          |
| 9        | 347      |                   |                            | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |  |  |          |
| 10       | 348      |                   |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | UVIC     |
| 11       | 349      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | } OSU    |
| 12       | 350      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  |          |
| 13       | 351      |                   |                            | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |  |  |          |
| 14       | 352      |                   |                            | 25                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |  |  |  |          |
| 15       | 353      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | UVIC     |
| 16       | 354      |                   |                            | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 17       | 355      |                   |                            | 15                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |  |  |          |
| 18       | 356      |                   |                            | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |  |  |  |          |
| 19       | 357      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | } OSU    |
| 20       | 358      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  |          |
| 21       | 359      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  | ONAR     |
| 22       | 360      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 23       | 361      |                   |                            | 0                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                                     |                                     |                                     |  |  |  |          |

Watchkeeper(s): Ron Ludy

Bottom Depth: 3941 m

Transmisso Cleaned: Y / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 00:01 | 17:01 |
| Bottom | 00:10 | 17:10 |
| End    | 00:25 | 17:25 |

Positional Information

Start Lat: 49 ° 33.38 N  
Lon: 138 ° 39.9 W

Bottom Lat: 49 ° 33.97 N  
Lon: 138 ° 40.08 W

End Lat: 49 ° 33.95 N  
Lon: 138 ° 39.996 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL • L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL • L<sup>-1</sup>

\*Date Run: \_\_\_\_|\_\_\_\_|\_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P20

Event #: 63

Ship: J.P. Riley

UTC Date (dd|mmm|yyyy): 19 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                     |    |     |      |    |      | Comments             |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|---------------------|----|-----|------|----|------|----------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> DIC | pH | TCM | base | HR | Diss |                      |
| 1        | 362      | 638               | 3.126                      | 80+10             | ✓                  | 4025.6        | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    | 4025.6 025           |
| 2        | 363      | 647               | 2.885                      | 3500              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 3        | 364      | 657               | 2.495                      | 3000              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 4        | 365      | 639               | 2.501                      | 3000              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 5        | 366      | 700               | 1.949                      | 2500              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 6        | 367      | 712               | 1.267                      | 2000              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 7        | 368      | 1174              | 0.491                      | 1500              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 8        | 369      | 1105              | 0.372                      | 1250              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 9        | 370      | 1333              | 0.315                      | 1000              | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 10       | 371      | 1487              | 0.1458                     | 800               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 11       | 372      | 715               | 0.601                      | 600               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 12       | 373      | 1374              | 1.543                      | 400               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 13       | 374      | 1301              | 2.462                      | 300               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 14       | 375      | 1302              | 3.241                      | 250               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 15       | 376      | 1306              | 4.102                      | 200               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 16       | 377      | 1321              | 4.596                      | 175               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 17       | 378      | 1367              | 5.348                      | 150               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 18       | 379      | 1368              | 6.636                      | 125               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 19       | 380      | 1365              | 6.974                      | 100               | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 20       | 381      | 1309              | 0.440                      | 75                | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    | - error in titration |
| 21       | 382      | 1328              | 7.223                      | 50                | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 22       | 383      | 1452              | 6.530                      | 25                | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 23       | 384      | 1448              | 6.616                      | 10                | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |
| 24       | 385      | 1327              | 6.624                      | 5                 | ✓                  |               | ✓   | ✓   | ✓     | ✓                   | ✓  | ✓   | ✓    | ✓  | ✓    |                      |

Watchkeeper(s): Ron Lewis

Bottom Depth: 3944 m

Transmisso Cleaned: Y / N

|        | UTC   | Local |
|--------|-------|-------|
| Start  | 01:14 | 18:17 |
| Bottom | 02:08 | 19:08 |
| End    | 03:27 | 20:27 |

Positional Information

Start Lat: 49° 33.97 N  
Lon: 138° 39.94 W

Start

Bottom

Bottom Lat: 49° 34.02 N  
Lon: 138° 40.07 W

End

End Lat: 49° 34.02 N  
Lon: 138° 39.93 W

Oxygen Info For This Cast

Blank Value: 0.006 mL · L<sup>-1</sup>  
Std Value: 0.743 mL · L<sup>-1</sup>  
\*Date Run: 19 | 08 | 2008  
Analyst: MD

\* Oxygen blanks and standards should be run daily, if possible

add 9 to deep 5# WHITE OXY BOY. dup. bottle 1375 6.581

## Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27Station: P20Event #: 64Ship: J.P. TullyUTC Date (dd|mmm|yyyy): 19 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 386      |                   |                            | 2000              | <input checked="" type="checkbox"/>                    |               |     | 1   |       |                 |  |  |  |  |  |          |
| 2        | 387      |                   |                            | 2000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 388      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 389      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 390      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 391      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 392      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 393      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 394      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 395      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 396      |                   |                            | 2000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 397      |                   |                            | 2000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 398      |                   |                            | 2000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 399      |                   |                            | 500               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 400      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 401      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 402      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 403      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 404      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 20       | 405      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 21       | 406      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 22       | 407      |                   |                            |                   | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 23       | 408      |                   |                            | 500               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 24       | 409      |                   |                            | 500               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): RLBottom Depth: 3944 mTransmisso Cleaned: ☒ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 04:41 | 21:43 |
| Bottom | 05:06 | 22:06 |
| End    | 05:40 | 22:40 |

## Positional Information

Start  
Lat: 49° 33.97 N  
Lon: 138° 40.00 WBottom  
Lat: 49° 33.90 N  
Lon: 138° 39.97 WEnd  
Lat: 49° 33.98 N  
Lon: 138° 39.95 W

## Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\*Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-22

Station: P20

Event #: 65

Ship: J.P. DILLY

UTC Date (dd|mmm|yyyy): 19 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 410      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 2        | 411      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 412      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 413      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 414      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 415      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 416      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 417      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 418      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 419      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 420      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 421      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 422      |                   |                            | 10                |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 423      |                   |                            | 10                |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 424      |                   |                            | 10                |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 425      |                   |                            | 10                |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): Ron L.

Bottom Depth: 3982 m

Transmisso Cleaned: ☒ / N

| Time   | UTC          | Local        |
|--------|--------------|--------------|
| Start  | <u>06:20</u> | <u>23:20</u> |
| Bottom | <u>06:35</u> | <u>23:35</u> |
| End    | <u>06:51</u> | <u>23:51</u> |

| Positional Information |                         |   |
|------------------------|-------------------------|---|
| Start                  | Lat: <u>49 ° 34.06</u>  | N |
|                        | Lon: <u>138 ° 40.01</u> | W |

|        |                         |   |
|--------|-------------------------|---|
| Bottom | Lat: <u>49 ° 34.10</u>  | N |
|        | Lon: <u>138 ° 39.94</u> | W |

|     |                         |   |
|-----|-------------------------|---|
| End | Lat: <u>49 ° 34.13</u>  | N |
|     | Lon: <u>138 ° 39.66</u> | W |

| Oxygen Info For This Cast |                            |
|---------------------------|----------------------------|
| Blank Value:              | _____ mL · L <sup>-1</sup> |
| Std Value:                | _____ mL · L <sup>-1</sup> |
| *Date Run:                | ___   ___   ___            |
| Analyst:                  | _____                      |

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P26

Event #: 72

Ship: Tully

UTC Date (dd|mmm|yyyy): 21 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |       |    |     |       |    |      | Comments             |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-------|----|-----|-------|----|------|----------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | chl b | pH | TCN | Gauss | HR | Diss |                      |
| 1        | 427      | 638               | 3.433                      | Bot-ro            | ✓ 4315               | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | titration ended 13.6 |
| 2        | 428      | 647               | 3.236                      | 4000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 3        | 429      | 657               | 2.974                      | 3500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 4        | 430      | 639               | 2.536                      | 3000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 5        | 431      | 700               | 1.912                      | 2500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 6        | 432      | 712               | 1.375                      | 2000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 7        | 433      | 1374              | 0.701                      | 1500              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 8        | 434      | 1174              | 0.485                      | 1250              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 9        | 435      | 1333              | 0.420                      | 1000              | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 10       | 436      | 1487              | 0.523                      | 800               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 11       | 437      | 715               | 0.561                      | 600               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 12       | 438      | 1105              | 0.777                      | 400               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 13       | 439      | 1301              | 1.359                      | 300               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 14       | 440      | 1302              | 1.974                      | 250               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 15       | 441      | 1306              | 2.703                      | 200               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 16       | 442      | 1321              | 3.090                      | 175               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 17       | 443      | 1367              | 4.1515                     | 150               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 18       | 444      | 1368              | 6.705                      | 125               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    | 2 BOD's              |
| 19       | 445      | 1365              | 7.123                      | 100               | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 20       | 446      | 1309              | 7.169                      | 75                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 21       | 447      | 1324              | 7.182                      | 50                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 22       | 448      | 1452              | 6.618                      | 25                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 23       | 449      | 1448              | 6.657                      | 10                | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |
| 24       | 450      | 1327              | 6.612                      | 5                 | ✓                    | ✓             | ✓   | ✓   | ✓     | ✓     | ✓  | ✓   | ✓     | ✓  | ✓    |                      |

Watchkeeper(s): Ronk

Bottom Depth: 4223 m

Transmisso Cleaned: (Y) / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 01:30 | 18:30 |
| Bottom | 02:27 | 19:30 |
| End    | 03:53 | 20:30 |

| Positional Information |            |   |
|------------------------|------------|---|
| Lat:                   | 50° 00.02  | N |
| Lon:                   | 144° 59.87 | W |

Start

Bottom

End

|      |            |   |
|------|------------|---|
| Lat: | 50° 00.07  | N |
| Lon: | 144° 59.96 | W |

|      |            |   |
|------|------------|---|
| Lat: | 49° 59.93  | N |
| Lon: | 144° 59.92 | W |

| Oxygen Info For This Cast |                            |
|---------------------------|----------------------------|
| Blank Value:              | 0.006 mL · L <sup>-1</sup> |
| Std Value:                | 0.743 mL · L <sup>-1</sup> |
| *Date Run:                | 21   08   2008             |
| Analyst:                  | R. Murray                  |

\* Oxygen blanks and standards should be run daily, if possible

White Bay for oxy's  
9 in front of Sample 14 dup. for "9440" oxy dup 250m  
1.997

Water Properties Group

③ UBC 2000 m cast  
Rosette Log

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

Cruise ID: 2008-27 Station: P26 Event #: 74 Ship: TULLY UTC Date (dd|mmm|yyyy): 21 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 452      |                   |                            | 2000              | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  |          |
| 2        | 453      |                   |                            | 2000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 454      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 455      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 456      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 457      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 458      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 459      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 460      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 461      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 462      |                   |                            | 2000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 463      |                   |                            | 2000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 464      |                   |                            | 500               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 465      |                   |                            | 500               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 466      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 467      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 468      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 469      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 470      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 20       | 471      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 21       | 472      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 22       | 473      |                   |                            |                   | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 23       | 474      |                   |                            | 500               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 24       | 475      |                   |                            | 500               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): Ron Ludwig

Bottom Depth: 4223 m

Transmisso Cleaned: (Y) N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 06:18 | 23:18 |
| Bottom | 06:45 | 23:45 |
| End    | 07:13 | 00:13 |

Positional Information  
Start  
Lat: 50° 00.37 N  
Lon: 144° 59.96 W

Bottom  
Lat: 49° 59.94 N  
Lon: 145° 0.154 W

End  
Lat: 49° 59.99 N  
Lon: 144° 59.97 W

Oxygen Info For This Cast  
Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_  
Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

ⓐ UBC 1000m + ODP ONAR  
Rosette Log

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

Cruise ID: 2008-27 Station: P26 Event #: 75 Ship: Tully UTC Date (dd|mmm|yyyy): 21 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 476      |                   |                            | 1000              | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  | UBC      |
| 2        | 477      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 3        | 478      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 479      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 480      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 481      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 7        | 482      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 483      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 9        | 484      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 485      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 486      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  | ONAR     |
| 12       | 487      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 13       | 488      |                   |                            | 1000              | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 14       | 489      |                   |                            | 500               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 15       | 490      |                   |                            | 250               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 16       | 491      |                   |                            | 200               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 17       | 492      |                   |                            | 150               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 18       | 493      |                   |                            | 100               | ✓                    |               |     |     |       |                 |  |  |  |  |  |          |
| 19       | 494      |                   |                            | 10                | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  |          |
| 20       | 495      |                   |                            | 10                | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  | UBC      |
| 21       | 496      |                   |                            | 10                | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  |          |
| 22       | 497      |                   |                            | 10                | ✓                    |               |     | ✓   |       |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |
| 24       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): R Lindsay / Madryd

Bottom Depth: 4223 m  
Transmisso Cleaned: (Y) / N

|            | UTC  | Local |
|------------|------|-------|
| Time Start | 0751 | 0051  |
| Bottom     | 0800 | 0100  |
| End        | 0830 | 0130  |

Positional Information  
Start Lat: 50 ° 00 018 N  
Lon: 145 ° 00 017 W

Bottom Lat: 50 ° 50 0 N  
Lon: 145 ° 00 0 W

End Lat: 50 ° 00 08 N  
Lon: 145 ° 00 001 W

Oxygen Info For This Cast  
Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_  
Analyst: \_\_\_\_\_

\*Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: Mooring

Event #: 83

Ship: Tully

UTC Date (dd|mmm|yyyy): 21 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |    |     |      | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|----|-----|------|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | pH | DIC | ONAM |          |
| 1        | 500      |                   |                            | 30                |                                                        |               |     |     |       |                 |    |     |      | } OSW    |
| 2        | 501      |                   |                            | 30                |                                                        |               |     |     |       |                 |    |     |      |          |
| 3        | 502      |                   |                            | 30                |                                                        |               | ✓   | ✓   | ✓     |                 | ✓  | ✓   |      |          |
| 4        | 503      |                   |                            | 20                |                                                        |               | ✓   | ✓   | ✓     |                 | ✓  | ✓   | ✓    |          |
| 5        | 504      |                   |                            | 10                |                                                        |               | ✓   | ✓   | ✓     |                 | ✓  | ✓   | ✓    |          |
| 6        | 505      |                   |                            | 5                 |                                                        |               |     |     |       |                 |    |     |      | } OSW    |
| 7        | 506      |                   |                            | 5                 |                                                        |               |     |     |       |                 |    |     |      |          |
| 8        | 507      |                   |                            | 5                 |                                                        |               | ✓   | ✓   | ✓     |                 | ✓  | ✓   |      |          |
| 9        | 508      |                   |                            | 0                 |                                                        |               | ✓   | ✓   | ✓     |                 | ✓  | ✓   | ✓    |          |
| 10       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 11       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 12       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 13       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 14       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 15       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 16       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 17       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 18       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |    |     |      |          |

Watchkeeper(s): MD DG KG

Bottom Depth: 4188 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1638 | 0938  |
| Bottom | 1644 | 0944  |
| End    |      |       |

**Positional Information**

Start Lat: 50 ° 08 279 N  
Lon: 144 ° 50 035 W

Bottom Lat: 50 ° 08 278 N  
Lon: 144 ° 50 029 W

End Lat: 50 ° 08 244 N  
Lon: 144 ° 50 052 W

**Oxygen Info For This Cast**

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27

Station: P26

Event #: 85

Ship: TULLY

UTC Date (dd|mmm|yyyy): 21 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |       |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|-------|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | BOD's |  |  |  |  |          |
| 1        | 509      |                   |                            | 1250              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  | } CSU    |
| 2        | 510      |                   |                            | 1000              | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 3        | 511      |                   |                            | 800               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 4        | 512      |                   |                            | 600               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 5        | 513      |                   |                            | 400               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 6        | 514      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 7        | 515      |                   |                            | 250               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 8        | 516      |                   |                            | 200               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 9        | 517      |                   |                            | 175               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 10       | 518      |                   |                            | 125               | <input checked="" type="checkbox"/>                    |               |     |     |       |                 | ✓✓    |  |  |  |  |          |
| 11       | 519      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  | } ONAR   |
| 12       | 520      |                   |                            | 50                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  |          |
| 13       | 521      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  |          |
| 14       | 522      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  |          |
| 15       | 523      |                   |                            | 10                | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  |          |
| 16       | 524      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |               |     |     |       |                 |       |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |       |  |  |  |  |          |

Watchkeeper(s): Ron Lindsay

Bottom Depth: 4222 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 20:40 | 13:40 |
| Bottom | 20:57 | 13:57 |
| End    | 21:32 | 14:32 |

| Positional Information |                  |   |
|------------------------|------------------|---|
| Start                  | Lat: 50 ° 00.00  | N |
|                        | Lon: 144 ° 59.96 | W |

|        |                  |   |
|--------|------------------|---|
| Bottom | Lat: 50 ° 0.005  | N |
|        | Lon: 145 ° 0.005 | W |

|     |                  |   |
|-----|------------------|---|
| End | Lat: 50 ° 0.024  | N |
|     | Lon: 144 ° 59.97 | W |

| Oxygen Info For This Cast |                            |
|---------------------------|----------------------------|
| Blank Value:              | _____ mL · L <sup>-1</sup> |
| Std Value:                | _____ mL · L <sup>-1</sup> |
| *Date Run:                | __   __   __               |
| Analyst:                  | _____                      |

\* Oxygen blanks and standards should be run daily, if possible

## Water Properties Group

## Rosette Log

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

Cruise ID: 2008-27Station: P26Event #: 86Ship: TullyUTC Date (dd|mmm|yyyy): 21|08|08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-----|-------------------------------------|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | <del>Oxy</del> DMS                  | Nut                                 | Sal | Chl a                               | NH <sub>4</sub> | HPCC                                | Phyto                               | DNBP 6                              | DNBP 8                              |  |          |
| 1        | 525      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | UVIC     |
| 2        | 526      |                   |                            | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                 |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 3        | 527      |                   |                            | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                 |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 4        | 528      |                   |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | UVIC     |
| 5        | 529      |                   |                            | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 6        | 530      |                   |                            | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |                                     |  |          |
| 7        | 531      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | UVIC     |
| 8        | 532      |                   |                            | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |                                     |  |          |
| 9        | 533      |                   |                            | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |                                     |  |          |
| 10       | 534      |                   |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | UVIC     |
| 11       | 535      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | } OSU    |
| 12       | 536      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  |          |
| 13       | 537      |                   |                            | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |                                     |  |          |
| 14       | 538      |                   |                            | 25                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 15       | 539      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | UVIC     |
| 16       | 540      |                   |                            | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 17       | 541      |                   |                            | 15                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     |                                     |                                     |  |          |
| 18       | 542      |                   |                            | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> |                                     |                                     |                                     |  |          |
| 19       | 543      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  | } OSU    |
| 20       | 544      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  |          |
| 21       | 545      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 22       | 546      |                   |                            | 0                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                 |                                     |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |          |
| 23       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  |          |
| 24       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                 |                                     |                                     |                                     |                                     |  |          |

Watchkeeper(s): Ron LBottom Depth: 4223 mTransmisso Cleaned: (Y) / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 23:01 | 16:01 |
| Bottom |       |       |
| End    | 23:35 | 16:35 |

## Positional Information

|       |                        |   |
|-------|------------------------|---|
| Start | Lat: <u>49° 59.99</u>  | N |
|       | Lon: <u>144° 59.98</u> | W |

|        |                        |   |
|--------|------------------------|---|
| Bottom | Lat: <u>49° 59.99</u>  | N |
|        | Lon: <u>145° 00.05</u> | W |

|     |                        |   |
|-----|------------------------|---|
| End | Lat: <u>49° 59.98</u>  | N |
|     | Lon: <u>145° 00.07</u> | W |

## Oxygen Info For This Cast

|              |                            |
|--------------|----------------------------|
| Blank Value: | _____ mL · L <sup>-1</sup> |
| Std Value:   | _____ mL · L <sup>-1</sup> |
| *Date Run:   | ____ ____ ____             |
| Analyst:     | _____                      |

\* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

KARINA'S CAST  
Rosette Log

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

Cruise ID: 2008-27 Station: P26 Event #: 87 Ship: J.P. Tully UTC Date (dd|mmm|yyyy): 22 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                 |     |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|-----------------|-----|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> | DIC |  |  |          |
| 1        | 547      |                   | 1%                         | 37m               | ✓                  |               | ✓   |     | ✓     |                 | ✓   |  |  |          |
| 2        | 548      |                   | 10%                        | 18m               | ✓                  |               | ✓   |     | ✓     |                 | ✓   |  |  |          |
| 3        | 549      |                   | 30%                        | 10m               | ✓                  |               | ✓   |     | ✓     |                 | ✓   |  |  |          |
| 4        | 550      |                   | 55%                        | 6m                | ✓                  |               | ✓   |     | ✓     |                 | ✓   |  |  |          |
| 5        | 551      |                   | 100%                       | 0m                | ✓                  |               | ✓   |     | ✓     |                 | ✓   |  |  |          |
| 6        |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 7        |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 8        |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 9        |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 10       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 11       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 12       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 13       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 14       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 15       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 16       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 17       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 18       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 19       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 20       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 21       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 22       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 23       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |
| 24       |          |                   |                            |                   |                    |               |     |     |       |                 |     |  |  |          |

Watchkeeper(s): Ron L

Bottom Depth: 4224 m  
Transmisso Cleaned: Y / N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 00:56 | 17:56 |
| Bottom |      | 00:58 | 17:58 |
| End    |      | 01:04 | 18:04 |

Positional Information  
Start  
Lat: 49 ° 59.994 N  
Lon: 145 ° 00.08 W

Bottom  
Lat: 50 ° 0.02 N  
Lon: 144 ° 59.97 W

End  
Lat: 50 ° 0.02 N  
Lon: 144 ° 59.97 W

Oxygen Info For This Cast  
Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_  
Analyst: \_\_\_\_\_  
\* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

CALIBRATION CAST  
Rosette Log

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

Cruise ID: 2008-27 Station: P25 Event #: 91 Ship: Tully UTC Date (dd|mmm|yyyy): 22 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                     |    |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|---------------------|----|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> DIC | pH |  |  |          |
| 1        | 553      |                   |                            | 2000              |                                                        |               |     |     |       | ✓                   |    |  |  |          |
| 2        | 554      |                   |                            |                   |                                                        |               |     |     |       | ✓                   |    |  |  |          |
| 3        | 555      |                   |                            |                   |                                                        |               |     |     |       | ✓                   |    |  |  |          |
| 4        | 556      |                   |                            |                   |                                                        |               |     |     |       | ✓                   |    |  |  |          |
| 5        | 557      |                   |                            |                   |                                                        |               |     |     |       | ✓                   |    |  |  |          |
| 6        | 558      |                   |                            |                   |                                                        |               |     |     |       |                     | ✓  |  |  |          |
| 7        | 559      |                   |                            |                   |                                                        |               |     |     |       |                     | ✓  |  |  |          |
| 8        | 560      |                   |                            |                   |                                                        |               |     |     |       |                     | ✓  |  |  |          |
| 9        | 561      |                   |                            |                   |                                                        |               |     |     |       |                     | ✓  |  |  |          |
| 10       | 562      |                   |                            |                   |                                                        |               |     |     |       |                     | ✓  |  |  |          |
| 11       | 563      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 12       | 564      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 13       | 565      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 14       | 566      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 15       | 567      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 16       | 568      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 17       | 569      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 18       | 570      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 19       | 571      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 20       | 572      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 21       | 573      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 22       | 574      |                   |                            |                   |                                                        |               |     |     |       |                     |    |  |  |          |
| 23       | 575      |                   |                            | 2000              |                                                        |               |     |     |       |                     |    |  |  |          |
| 24       | 576      |                   |                            | 5                 |                                                        |               |     |     |       |                     |    |  |  |          |

Watchkeeper(s): DG MD

Bottom Depth: 4122 m  
Transmisso Cleaned: (Y) / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1530 | 830   |
| Bottom | 1608 | 908   |
| End    | 1636 | 936   |

Positional Information  
Start  
Lat: 49 ° 59 972 N  
Lon: 143 ° 36 310 W

Bottom  
Lat: 49 ° 59 981 N  
Lon: 143 ° 36 380 W

End  
Lat: 49 ° 59 819 N  
Lon: 143 ° 36 816 W

Oxygen Info For This Cast  
Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>  
\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_  
Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: P24

Event #: 93

Ship: Tully

UTC Date (dd|mmm|yyyy): 22 | 08 | 08

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |                                     |                                     |                                     |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut                                 | Sal                                 | Chl a                               | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 577      |                   |                            | 10 m              | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  | Sunny!!  |
| 2        | 578      |                   |                            | 10 m              | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 3        | 579      |                   |                            | 10 m              | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 4        | 580      |                   |                            | 10 m              | <input checked="" type="checkbox"/>                    |               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 5        | 581      |                   |                            | 5 m               | <input checked="" type="checkbox"/>                    |               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 6        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 7        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 8        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 9        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 10       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 11       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 12       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 13       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 14       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 15       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 16       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |

Watchkeeper(s): Ron L

Bottom Depth: 3965 m

Transmisso Cleaned: ☒ Y ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 20:47 | 13:49 |
| Bottom | 21:13 | 14:13 |
| End    | 21:42 | 14:42 |

**Positional Information**

Start

Lat: 49 ° 50 22 N

Lon: 142 ° 40.04 W

Bottom

Lat: 49 ° 50.248 N

Lon: 142 ° 40.043 W

End

Lat: 49 ° 5023 N

Lon: 142 ° 4097 W

**Oxygen Info For This Cast**

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27 Station: P22 Event #: 97 Ship: Tully UTC Date (dd|mmm|yyyy): 23|08|2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |     |     |       |                 |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-----|-----|-------|-----------------|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |          |
| 1        | 583      |                   |                            | 10m               |                                                        |               |     |     |       |                 |  |  |  |          |
| 2        | 584      |                   |                            | 10m               |                                                        |               |     |     |       |                 |  |  |  |          |
| 3        | 585      |                   |                            | 10m               |                                                        |               |     |     |       |                 |  |  |  |          |
| 4        | 586      |                   |                            | 10m               |                                                        |               | ✓✓  | ✓   | ✓     |                 |  |  |  |          |
| 5        | 587      |                   |                            | 5m                |                                                        |               | ✓✓  | ✓   | ✓     |                 |  |  |  |          |
| 6        |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 7        |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 8        |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 9        |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 10       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 11       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 12       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 13       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 14       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 15       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 16       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |     |     |       |                 |  |  |  |          |

Watchkeeper(s): M.P. / RON L

Bottom Depth: 3871 m

Transmisso Cleaned: ☒ N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 06:53 | 2353  |
| Bottom |      | 0725  | 0025  |
| End    |      | 752   | 0052  |

Positional Information

Start

Lat: 49 ° 42.06 N

Lon: 140 ° 39.9 W

Bottom

Lat: 49 ° 42.06 N

Lon: 140 ° 39.814 W

End

Lat: 49 ° 42.024 N

Lon: 140 ° 39.756 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_|\_\_\_\_|\_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-21

Station: 550

Event #: 113

Ship: FP Tully

UTC Date (dd|mmm|yyyy): 25 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken |                                     |                                     |                                     |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL • L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy           | Nut                                 | Sal                                 | Chl a                               | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 588      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  | } OSU    |
| 2        | 589      |                   |                            | 30                | <input checked="" type="checkbox"/>                    |               | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 3        | 590      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 4        | 591      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 5        | 592      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |               |                                     |                                     |                                     |                 |  |  |  |  |  | ONAR     |
| 6        | 593      |                   |                            | 5                 | <input checked="" type="checkbox"/>                    |               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 7        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 8        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 9        |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 10       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 11       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 12       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 13       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 14       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 15       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 16       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                                        |               |                                     |                                     |                                     |                 |  |  |  |  |  |          |

Watchkeeper(s): R.L.

Bottom Depth: 2638 m

Transmisso Cleaned: 0 / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 19:38 | 12:38 |
| Bottom | 20:04 | 13:06 |
| End    | 20:33 | 13:38 |

Positional Information

Start

Lat: 50 ° 59.0194 N

Lon: 130 ° 49.7293 W

Bottom

Lat: 50 ° 00.1 N

Lon: 130 ° 49.97 W

End

Lat: 50 ° 00.7 N

Lon: 130 ° 50.01 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL • L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL • L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

Water Properties Group

Rosette Log

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

Cruise ID: 2008-27

Station: 551

Event #: 115

Ship: Tully

UTC Date (dd|mmm|yyyy): 26 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |     |                                     |                                     |  |  |  |  |  | Comments  |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-----|-------------------------------------|-------------------------------------|--|--|--|--|--|-----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                 | Nut                                 | Sal | Chl a                               | NH <sub>4</sub>                     |  |  |  |  |  |           |
| 1        | 594      | 632               | 0.891                      | Bot-10            | <input checked="" type="checkbox"/> 485                | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 2        | 595      | 76                | 0.979                      | 400               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 3        | 596      |                   |                            | 300               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |  |  |  |  |  | UVIC      |
| 4        | 597      | 329               | 1.1624                     | 300               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 5        | 598      | 425               | 1.727                      | 250               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 6        | 599      | 371               | 2.239                      | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 7        | 600      | 439               | 2.150                      | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 8        | 601      |                   |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |  |  |  |  |  | UVIC      |
| 9        | 602      | 456               | 2.819                      | 150               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  |           |
| 10       | 603      | 462               | 3.619                      | 125               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     |                                     |                                     |  |  |  |  |  | Bottle 2x |
| 11       | 604      | 541               | 4.333                      | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 12       | 605      | 471               | 5.824                      | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 13       | 606      |                   |                            | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |  |  |  |  |  | UVIC      |
| 14       | 607      | 557               | 6.753                      | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 15       | 608      |                   |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |  |  |  |  |  | UVIC      |
| 16       | 609      | 2040              | 6.074                      | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 17       | 610      | 559               | 6.155                      | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  |  |  |  |  |           |
| 18       | 611      | 575               | 6.182                      | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 19       | 612      |                   |                            | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |     |                                     |                                     |  |  |  |  |  | UVIC      |
| 20       | 613      | 586               | 6.238                      | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 21       | 614      | 589               | 6.242                      | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |     | <input checked="" type="checkbox"/> |                                     |  |  |  |  |  |           |
| 22       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                                     |  |  |  |  |  |           |
| 23       |          |                   |                            |                   |                                                        |                                     |                                     |     |                                     |                                     |  |  |  |  |  |           |
| 24       | 603      | 1375              | 3.167                      |                   |                                                        |                                     |                                     |     |                                     |                                     |  |  |  |  |  |           |

Watchkeeper(s): RL

Bottom Depth: 497 m

Transmissio Cleaned: (Y) / N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 00:52 | 17:52 |
| Bottom | 01:05 | 18:05 |
| End    | 01:25 | 18:25 |

Positional Information

Start

Lat: 51 ° 11.91 N

Lon: 129 ° 59.97 W

Bottom

Lat: 51 ° 11.98 N

Lon: 129 ° 59.99 W

End

Lat: 51 ° 11.99 N

Lon: 129 ° 59.99 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 0.74433 mL · L<sup>-1</sup>

\*Date Run: 23 | 08 | 2008

Analyst: MD

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27 Station: SS3 Event #: 119 Ship: Tully UTC Date (dd|mmm|yyyy): 26 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |                                     |                                     |                 |  |  |  |  |  | Comments                |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|--|--|--|--|--|-------------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                 | Nut                                 | Sal                                 | Chl a                               | NH <sub>4</sub> |  |  |  |  |  |                         |
| 1        | 615      | 690               | 2.009                      | Bot-10            | <input checked="" type="checkbox"/> 282                | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |                 |  |  |  |  |  |                         |
| 2        | 616      | 1175              | 1.896                      | 250               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                 |  |  |  |  |  |                         |
| 3        | 617      | 1176              | 2.188                      | 200               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                 |  |  |  |  |  |                         |
| 4        | 618      | 1146              | 2.435                      | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |                 |  |  |  |  |  | label has 150m flask #4 |
| 5        | 619      | -                 |                            | 150               | <input checked="" type="checkbox"/>                    |                                     |                                     |                                     |                                     |                 |  |  |  |  |  | UVIC                    |
| 6        | 620      | 1180              | 2.823                      | 150               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |                 |  |  |  |  |  |                         |
| 7        | 621      | 1414              | 2.876                      | 125               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |                 |  |  |  |  |  |                         |
| 8        | 622      | 1104              | 3.333                      | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                 |  |  |  |  |  |                         |
| 9        | 623      | 1144              | 4.054                      | 75                | <input checked="" type="checkbox"/>                    |                                     |                                     |                                     |                                     |                 |  |  |  |  |  | UVIC                    |
| 10       | 624      | 1253              |                            | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 11       | 625      | 1213              | 5.586                      | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 12       | 626      | 1327              |                            | 40                | <input checked="" type="checkbox"/>                    |                                     |                                     |                                     |                                     |                 |  |  |  |  |  | UVIC                    |
| 13       | 627      | 1315              | 5.430                      | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 14       | 628      | 1317              | 5.750                      | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 15       | 629      | 1318              | 6.096                      | 20                | <input checked="" type="checkbox"/>                    |                                     |                                     |                                     |                                     |                 |  |  |  |  |  | UVIC                    |
| 16       | 630      |                   |                            | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 17       | 631      | 1319              | 6.354                      | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 18       | 632      | 1320              | 6.358                      | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |                         |
| 19       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |
| 20       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |
| 21       | 62820    | 2020              | 5.784                      |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |
| 22       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |
| 23       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |
| 24       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |                         |

Watchkeeper(s): ML

Bottom Depth: 292 m

Transmisso Cleaned: ☒ Y / ☐ N

| Time   | UTC   | Local |
|--------|-------|-------|
| Start  | 05:27 |       |
| Bottom | 5:33  |       |
| End    | 5:52  |       |

## Positional Information

Start  
Lat: 51 ° 15.00 N  
Lon: 129 ° 28.19 W

Bottom  
Lat: 51 ° 14.99 N  
Lon: 129 ° 21.3 W

End  
Lat: 51 ° 14.992 N  
Lon: 129 ° 21.287 W

## Oxygen Info For This Cast

Blank Value: 0.0085 mL · L<sup>-1</sup>

Std Value: 0.74333 mL · L<sup>-1</sup>

\*Date Run: 23 | 08 | 08

Analyst: MD

\*Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: \_\_\_\_\_

Station: SS7

Event #: 127

Ship: Tully

UTC Date (dd|mmm|yyyy): 27|08|2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                    | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments           |
|----------|----------|-------------------|----------------------------|-------------------|--------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|--------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                    |
| 1        | 635      | 632               | 2.437                      | Bot-10            | ✓ 115              | ✓             | ✓   |     |       |                 |  |  |  |  |  | Oxy - 007 at graph |
| 2        | 636      | 76                | 2.883                      | 100               | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  | 7100 oxy           |
| 3        | 637      | 425               | 4.232                      | 75                | ✓                  |               |     |     |       |                 |  |  |  |  |  | UVIC               |
| 4        | 638      | 271               | 5.528                      | 75                | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  | entered at 639     |
| 5        | 639      | 439               | 5.134                      | 50                | ✓                  | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  | entered at 639     |
| 6        | 640      | 462               | 5.228                      | 40                | ✓                  | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                    |
| 7        | 641      |                   |                            | 40                | ✓                  |               |     |     |       |                 |  |  |  |  |  | UVIC               |
| 8        | 642      | 471               | 5.388                      | 30                | ✓                  | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                    |
| 9        | 643      |                   |                            | 20                | ✓                  |               |     |     |       |                 |  |  |  |  |  | UVIC               |
| 10       | 644      | 1158              | 5.377                      | 20                | ✓                  | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                    |
| 11       | 645      | 557               | 6.066                      | 10                | ✓                  | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                    |
| 12       | 646      | 2040              |                            | 5                 | ✓                  | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  |                    |
| 13       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 14       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 15       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 16       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 17       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 18       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 19       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 20       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 21       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 22       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 23       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |
| 24       |          |                   |                            |                   |                    |               |     |     |       |                 |  |  |  |  |  |                    |

Watchkeeper(s): R2

Bottom Depth: 125 m

Transmissio Cleaned: Y / N

|        | Time | UTC  | Local |
|--------|------|------|-------|
| Start  |      | 4:51 | 9:51  |
| Bottom |      | 4:54 | 9:54  |
| End    |      | 5:05 | 10:05 |

Positional Information

Start

Lat: 51 ° 24.781 N

Lon: 127 ° 47.602 W

Bottom

Lat: 51 ° 24.781 N

Lon: 127 ° 47.60 W

End

Lat: 51 ° 24.7 N

Lon: 127 ° 47.6 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_|\_\_\_\_|\_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

NOTE: 637 - 642 Entered Oxy Green Box  
Oxy's. Sample # incorrectly

Water Properties Group

Rosette Log

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

Cruise ID: \_\_\_\_\_ Station: 557 Event #: 127 Ship: \_\_\_\_\_ UTC Date (dd|mmm|yyyy): \_\_\_\_ | \_\_\_\_ | \_\_\_\_

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                               |          | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|-----------------------------------------------|----------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL * L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> | Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 635      | 632               | 2.437                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 2        | 636      | 76                | 2.883                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 3        |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 4        | 638      | 425               | 4.232                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 5        | 639      | 371               | 5.528                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 6        | 640      | 439               | 5.134                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 7        |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 8        | 642      | 462               | 5.228                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 9        |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 10       | 644      | 1158              | 5377                       |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 11       | 645      | 557               | 6.066                      |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 12       | 646      | 2040              | ?                          |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 13       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 14       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 15       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 16       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |
| 24       |          |                   |                            |                   |                                               |          |               |     |     |       |                 |  |  |  |  |  |          |

Watchkeeper(s): \_\_\_\_\_

Bottom Depth: \_\_\_\_\_ m

Transmisso Cleaned:     Y / N

| Time   | UTC | Local |
|--------|-----|-------|
| Start  |     |       |
| Bottom |     |       |
| End    |     |       |

Positional Information

Start

Lat:            °            N

Lon:            °            W

Bottom

Lat:            °            N

Lon:            °            W

End

Lat:            °            N

Lon:            °            W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL \* L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL \* L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: Ri 1

Event #: 128

Ship: Tully

UTC Date (dd|mmm|yyyy): 27 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments        |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|-----------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                 |
| 1        | 647      | 690               | 2.447                      | 607-10            | ✓ 313                | ✓             | ✓   |     |       |                 |  |  |  |  |  |                 |
| 2        | 648      | 1175              | 2.327                      | 300               | ✓                    | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  |                 |
| 3        | 649      | -                 | -                          | 300               | ✓                    |               |     |     |       |                 |  |  |  |  |  | uVIC            |
| 4        | 650      | 1146              | 2.355                      | 250               | ✓                    | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  |                 |
| 5        | 651      | 1180              | 2.416                      | 200               | ✓                    | ✓             | ✓   |     |       |                 |  |  |  |  |  |                 |
| 6        | 652      | 1414              | 2.433                      | 175               | ✓                    | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  |                 |
| 7        | 653      | 1106              | 2.519                      | 150               | ✓                    | ✓             | ✓   |     |       |                 |  |  |  |  |  |                 |
| 8        | 654      | -                 | -                          | 150               | ✓                    |               |     |     |       |                 |  |  |  |  |  | uVIC            |
| 9        | 655      | 1213              | 2.569                      | 125               | ✓                    | ✓             | ✓   |     |       |                 |  |  |  |  |  |                 |
| 10       | 656      | 1315              | 3.070                      | 100               | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  | -change oxydapt |
| 11       | 657      | 1317              | 3.835                      | 75                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 12       | 658      | -                 | -                          | 75                | ✓                    |               |     |     |       |                 |  |  |  |  |  | uVIC            |
| 13       | 659      | 1326              | 4.434                      | 50                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 14       | 660      | 1319              | 4.586                      | 40                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 15       | 661      | -                 | -                          | 40                | ✓                    |               |     |     |       |                 |  |  |  |  |  | uVIC            |
| 16       | 662      | 1320              | 4.795                      | 30                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 17       | 663      | 1300              | 4.775                      | 20                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 18       | 664      | -                 | -                          | 20                | ✓                    |               |     |     |       |                 |  |  |  |  |  | uVIC            |
| 19       | 665      | 1307              | 4.638                      | 10                | ✓                    | ✓             | ✓   |     | ✓     |                 |  |  |  |  |  |                 |
| 20       | 666      | 1373              | 4.810                      | 5                 |                      | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  |                 |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 24       | 652D     | 1123              | 2.412                      |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |

Watchkeeper(s): RL

Bottom Depth: 325 m

Transmisso Cleaned: Y / ☒ N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 06:13 | 11:13 |
| Bottom |      | 06:18 | 11:18 |
| End    |      | 06:37 | 11:37 |

Positional Information

Start

Lat: 51° 26.39 N

Lon: 127° 38.26 W

Bottom

Lat: 51° 26.42 N

Lon: 127° 38.25 W

End

Lat: 51° 26.42 N

Lon: 127° 38.20 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 0.743 mL · L<sup>-1</sup>

\*Date Run: 23 | 08 | 08

Analyst: MD

\*Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: \_\_\_\_\_

Station: R04

Event #: 134

Ship: Tully

UTC Date (dd|mmm|yyyy): 27 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments          |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|-------------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                   |
| 1        | 669      | 638               | 2.473                      | Bot-10            | ✓ 290                | ✓             | ✓✓  |     |       |                 |  |  |  |  |  |                   |
| 2        | 670      | 647               | 2.571                      | 250               | ✓                    | ✓             | ✓✓  | ✓   |       |                 |  |  |  |  |  |                   |
| 3        | 671      | 657               | 2.669                      | 200               | ✓                    | ✓             | ✓✓  | ✓   |       |                 |  |  |  |  |  |                   |
| 4        | 672      | 639               | 2.643                      | 175               | ✓                    | ✓             | ✓✓  |     |       |                 |  |  |  |  |  | — check depth oxy |
| 5        | 673      |                   |                            | 150               | ✓                    |               |     |     |       |                 |  |  |  |  |  | UVIC              |
| 6        | 674      | 712               | 2.686                      | 150               | ✓                    | ✓             | ✓✓  |     |       |                 |  |  |  |  |  |                   |
| 7        | 675      | 1174              | 2.689                      | 125               | ✓                    | ✓             | ✓✓  |     |       |                 |  |  |  |  |  |                   |
| 8        | 676      | 1105              | 2.793                      | 100               | ✓                    | ✓             | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 9        | 677      |                   |                            | 75                | ✓                    |               |     |     |       |                 |  |  |  |  |  | UVIC              |
| 10       | 678      | 1487              | 3.749                      | 75                | ✓                    | ✓             | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 11       | 679      | 715               | 4.164                      | 50                | ✓                    | ✓✓            | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 12       | 680      | 1374              | 4.163                      | 40                | ✓                    | ✓             | ✓✓  |     | ✓✓    |                 |  |  |  |  |  | check depths      |
| 13       | 681      |                   |                            | 40                | ✓                    |               |     |     |       |                 |  |  |  |  |  | UVIC              |
| 14       | 682      | 1327              | 4.117                      | 30                | ✓                    | ✓             | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 15       | 683      |                   |                            | 20                | ✓                    |               |     |     |       |                 |  |  |  |  |  | UVIC              |
| 16       | 684      | 1321              | 4.291                      | 20                | ✓                    | ✓             | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 17       | 685      | 1367              | 4.628                      | 10                | ✓                    | ✓             | ✓✓  |     | ✓     |                 |  |  |  |  |  |                   |
| 18       | 686      | 1368              | 5.477                      | 5                 | ✓                    | ✓             | ✓✓  | ✓   | ✓     |                 |  |  |  |  |  |                   |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |
| 24       | 67904    | 1302              | 4.099                      |                   |                      |               |     |     |       |                 |  |  |  |  |  |                   |

Watchkeeper(s): AM SS MD

Bottom Depth: 200 m

Transmisso Cleaned: Y / N

|        | Time | UTC  | Local |
|--------|------|------|-------|
| Start  |      | 1225 | 525   |
| Bottom |      | 1237 | 537   |
| End    |      | 1302 | 602   |

Positional Information

Start Lat: 51 ° 38 878 N

Lon: 127 ° 26 704 W

Start

Bottom Lat: 51 ° 38 862 N

Lon: 127 ° 26 693 W

Bottom

End Lat: 51 ° 40.722 N

Lon: 127 ° 19 961 W

End

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_ | \_\_\_\_ | \_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: M2

Event #: 141

Ship: JP Tully

UTC Date (dd|mmm|yyyy): 27 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                                                        | Samples Taken                       |                                     |                                     |                                     |                 |  |  |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|--------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|--|--|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed <input checked="" type="checkbox"/> Pressure | Oxy                                 | Nut                                 | Sal                                 | Chl a                               | NH <sub>4</sub> |  |  |  |  |  |          |
| 1        | 689      | 690               | 2.430                      | 301-10            | <input checked="" type="checkbox"/> 188                | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |                 |  |  |  |  |  |          |
| 2        | 690      | 1175              | 2.349                      | 175               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                                     |                 |  |  |  |  |  |          |
| 3        | 691      | 1176              | 2.508                      | 150               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                                     |                 |  |  |  |  |  |          |
| 4        | 692      | 1146              | 2.539                      | 125               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 5        | 693      | 1180              | 2.777                      | 100               | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 6        | 694      | 1414              | 3.025                      | 75                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 7        | 695      | 1106              | 4.070                      | 50                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 8        | 696      | 1144              | 5.185                      | 40                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 9        | 697      | 1213              | 5.1494                     | 30                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 10       | 698      | 1315              | 5.295                      | 20                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 11       | 699      | 1317              | 5.772                      | 10                | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> |                                     |                                     | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 12       | 700      | 2020              | 5.646                      | 5                 | <input checked="" type="checkbox"/>                    | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                 |  |  |  |  |  |          |
| 13       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 14       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 15       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 16       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 17       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 18       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 19       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 20       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 21       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 22       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 23       |          |                   |                            |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |
| 24       | 692      | 1123              | 2.539                      |                   |                                                        |                                     |                                     |                                     |                                     |                 |  |  |  |  |  |          |

Watchkeeper(s): RL

Bottom Depth: 188 <sup>ship side</sup> m

Transmisso Cleaned: ☒ Y ☐ N

|        | UTC   | Local |
|--------|-------|-------|
| Start  | 22:22 | 15:22 |
| Bottom | 22:26 | 15:26 |
| End    | 22:39 | 15:39 |

Positional Information

Start

Lat: 51 ° 46.50 N

Lon: 127 ° 53.24 W

Bottom

Lat: 51 ° 46.48 N

Lon: 127 ° 53.25 W

End

Lat: 51 ° 46.44 N

Lon: 127 ° 53.27 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 0.7443 mL · L<sup>-1</sup>

\*Date Run: 27 | 08 | 08

Analyst: MD

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: M 3

Event #: 142

Ship: Tully

UTC Date (dd|mmm|yyyy): 27 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |          |
| 1        | 701      | 638               | 2.202                      | Bot-10            | ✓ 324                | ✓             | ✓   |     |       |                 |  |  |  |          |
| 2        | 702      | 647               | 2.274                      | 250               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |          |
| 3        | 703      | 657               | 2.311                      | 200               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |          |
| 4        | 704      | 639               | 2.460                      | 175               | ✓                    |               | ✓   |     |       |                 |  |  |  |          |
| 5        | 705      | 700               | 2.538                      | 150               | ✓                    |               | ✓   |     |       |                 |  |  |  |          |
| 6        | 706      | 712               | 2.560                      | 125               | ✓                    | ✓             | ✓   |     |       |                 |  |  |  |          |
| 7        | 707      | 1174              | 2.708                      | 100               | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 8        | 708      | 1105              | 3.063                      | 75                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 9        | 709      | 1333              | 4.074                      | 50                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 10       | 710      | 1487              | 4.019                      | 40                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 11       | 711      | 715               | 5.212                      | 30                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 12       | 712      | 1374              | 5.917                      | 20                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 13       | 713      | 1301              | 5.829                      | 10                | ✓                    |               | ✓   |     |       | ✓               |  |  |  |          |
| 14       | 714      | 1302              | 5.960                      | 5                 |                      | ✓             | ✓   | ✓   |       | ✓               |  |  |  |          |
| 15       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 16       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 17       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 18       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 24       | 706      | 1327              | 2.562                      |                   |                      |               |     |     |       |                 |  |  |  |          |

Watchkeeper(s): RF

Bottom Depth: 325 m

Transmissio Cleaned: (Y) N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 23:26 | 16:26 |
| Bottom |      | 23:31 | 16:31 |
| End    |      | 23:47 | 16:47 |

Positional Information

Start

Lat: 51 ° 46 35 N

Lon: 127 ° 54 56 W

Bottom

Lat: 51 ° 46 32 N

Lon: 127 ° 54 60 W

End

Lat: 51 ° 46 26 N

Lon: 127 ° 54 62 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 0.74433 mL · L<sup>-1</sup>

\*Date Run: 24 | 08 | 08

Analyst: MD

\*Oxygen blanks and standards should be run daily, if possible

54-24

DJP

OXY: WHITE Box

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: M4

Event #: 143

Ship: Tully

UTC Date (dd|mmm|yyyy): 26 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments  |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|-----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed ✓ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |           |
| 1        | 715      | 1456              | 2.203                      | 1200              | ✓ 425                | ✓             | ✓   |     |       |                 |  |  |  |  |  |           |
| 2        | 716      | 1354              | 2.209                      | 400               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 3        | 717      | 1340              | 2.241                      | 300               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 4        | 718      | 1341              | 2.247                      | 250               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 5        | 719      | 1344              | 2.308                      | 200               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 6        | 720      | 1347              | 2.288                      | 175               | ✓                    | ✓             | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 7        | 721      | 1351              | 2.431                      | 150               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  | see below |
| 8        | 722      | 1212              | 2.609                      | 125               | ✓                    |               | ✓   | ✓   |       |                 |  |  |  |  |  |           |
| 9        | 723      | 1356              | 2.690                      | 100               | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 10       | 724      | 1358              | 3.100                      | 75                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 11       | 725      | 1360              | 4.288                      | 50                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 12       | 726      | 1361              | 4.861                      | 40                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 13       | 727      | 1362              | 5.169                      | 30                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 14       | 728      | 1363              | 5.949                      | 20                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 15       | 729      | 1364              | 5.972                      | 10                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 16       | 730      | 1366              | 5.841                      | 5                 | ✓                    | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  |           |
| 17       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 18       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |
| 24       | 720      | 1204              | 2.324                      |                   |                      |               |     |     |       |                 |  |  |  |  |  |           |

Watchkeeper(s): RL

Bottom Depth: 432 m

Transmisso Cleaned: Y / N

|        | Time | UTC   | Local |
|--------|------|-------|-------|
| Start  |      | 00:39 | 17:39 |
| Bottom |      | 00:46 | 17:47 |
| End    |      | 01:07 |       |

Positional Information

Start

Lat: 51 ° 44.71 N

Lon: 128 ° 00.1 W

Bottom

Lat: 51 ° 44.70 N

Lon: 128 ° 00.11 W

End

Lat: 51 ° 44.68 N

Lon: 128 ° 0.11 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 0.7443 mL · L<sup>-1</sup>

\*Date Run: 24 | 08 | 08

Analyst: MD

\*Oxygen blanks and standards should be run daily, if possible

Oxy RED Box

721 called 9721 because was called 720 Duplicate of 720

05-35  
01-34  
08-38  
06-36

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: M6

Event #: 145

Ship: Tully

UTC Date (dd|mmm|yyyy): 28|08|2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  | Comments |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|----------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed √ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |          |
| 1        | 732      |                   |                            | 30                | ✓                    | 231 (Bottom)  |     |     |       |                 |  |  |  | OSU      |
| 2        | 733      |                   |                            | 30                | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  | OSU      |
| 3        | 734      |                   |                            | 5                 | ✓                    |               |     |     |       |                 |  |  |  | OSU      |
| 4        | 735      |                   |                            | 5                 | ✓                    |               |     |     |       |                 |  |  |  | OSU      |
| 5        | 736      |                   |                            | 5                 | ✓                    |               | ✓   | ✓   | ✓     |                 |  |  |  |          |
| 6        | 737      |                   |                            | 5                 | ✓                    |               |     |     |       |                 |  |  |  | ONAR     |
| 7        |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 8        |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 9        |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 10       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 11       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 12       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 13       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 14       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 15       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 16       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 17       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 18       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |
| 24       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |          |

Watchkeeper(s): KH

Bottom Depth: 240 m

Transmisso Cleaned: (Y) N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 3:00 | 20:00 |
| Bottom | 3:05 | 20:05 |
| End    | 3:13 | 20:13 |

Positional Information

Start Lat: 51 ° 42.73 N  
Lon: 128 ° 07.46 W

Bottom Lat: 51 ° 42.77 N  
Lon: 128 ° 07.59 W

End Lat: 51 ° 42.85 N  
Lon: 128 ° 07.82 W

Oxygen Info For This Cast

Blank Value: \_\_\_\_\_ mL · L<sup>-1</sup>

Std Value: \_\_\_\_\_ mL · L<sup>-1</sup>

\*Date Run: \_\_\_\_|\_\_\_\_|\_\_\_\_

Analyst: \_\_\_\_\_

\* Oxygen blanks and standards should be run daily, if possible

# Water Properties Group

# Rosette Log

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

Cruise ID: 2008-27

Station: SSS

Event #: 147

Ship: TULIY

UTC Date (dd|mmm|yyyy): 28 | 08 | 2008

| Niskin # | Sample # | Oxygen Titrations |                            | Rosette Operation |                      | Samples Taken |     |     |       |                 |  |  |  |  |  | Comments        |
|----------|----------|-------------------|----------------------------|-------------------|----------------------|---------------|-----|-----|-------|-----------------|--|--|--|--|--|-----------------|
|          |          | Flask Serial #    | Value mL · L <sup>-1</sup> | Target Pressure   | Confirmed √ Pressure | Oxy           | Nut | Sal | Chl a | NH <sub>4</sub> |  |  |  |  |  |                 |
| 1        | 738      | 1452              | 1.814                      | Bot-10            | ✓ 182                | ✓             | ✓   |     |       |                 |  |  |  |  |  |                 |
| 2        | 739      | 1328              | 1.914                      | 175               | ✓                    | ✓             |     | ✓   |       |                 |  |  |  |  |  |                 |
| 3        | 740      | 580               | 2.428                      | 150               | ✓                    | ✓             |     | ✓   |       |                 |  |  |  |  |  |                 |
| 4        | 741      | 1309              | 2.308                      | 125               | ✓                    |               |     |     |       |                 |  |  |  |  |  |                 |
| 5        | 742      | 1365              | 3.812                      | 100               | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  |                 |
| 6        | 743      | 1375              | 4.267                      | 75                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  |                 |
| 7        | 744      | 575               | 5.211                      | 50                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  |                 |
| 8        | 745      | 1110              |                            | 40                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  |                 |
| 9        | 746      | 1223              |                            | 30                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  | - runtime error |
| 10       | 747      | 1448              | 5.881                      | 20                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  | 11              |
| 11       | 748      | 559               | 6.089                      | 10                | ✓                    |               |     |     | ✓     |                 |  |  |  |  |  |                 |
| 12       | 750      | 589               | 4.123                      | 5                 |                      | ✓             | ✓   | ✓   | ✓     |                 |  |  |  |  |  |                 |
| 13       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 14       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 15       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 16       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 17       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 18       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 19       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 20       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 21       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 22       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 23       |          |                   |                            |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |
| 24       | 740      | 605               | 2.417                      |                   |                      |               |     |     |       |                 |  |  |  |  |  |                 |

Watchkeeper(s): Ran P.

Bottom Depth: 201 m

Transmisso Cleaned: (Y) / N

|        | UTC  | Local |
|--------|------|-------|
| Start  | 6:12 | 11:10 |
| Bottom | 6:20 | 11:20 |
| End    | 6:41 | 11:41 |

Positional Information

Start Lat: 51 ° 28 23 N

Lon: 128 ° 30.12 W

Bottom Lat: 51 ° 28 15 N

Lon: 128 ° 29 89 W

End Lat: 51 ° 28.07 N

Lon: 128 ° 30.03 W

Oxygen Info For This Cast

Blank Value: 0.0083 mL · L<sup>-1</sup>

Std Value: 2.74433 mL · L<sup>-1</sup>

\*Date Run: 24 | 08 | 08

Analyst: MD

\* Oxygen blanks and standards should be run daily, if possible

12:50

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

Station: CSO2

Event #: 149

Ship: ✓ P 1244

UTC Date (dd|mmm|yyyy): 28 | 08 | 2008

*B. line*

Bottom Depth: 1899 m

Transmisso Cleaned: ☒ Y / N

| Time   | UTC  | Local |
|--------|------|-------|
| Start  | 1444 | 0744  |
| Bottom | 1514 | 0814  |
| End    | 1607 | 0914  |

**Positional Information**

|      |     |   |    |     |   |
|------|-----|---|----|-----|---|
| Lat: | 50  | ° | 41 | 274 | N |
| Lon: | 129 | ° | 28 | 273 | W |

## Start

|        |                     |
|--------|---------------------|
| Bottom | Lat: 50 ° 41 236 N  |
|        | Lon: 129 ° 28 294 W |

bottom

|     |                     |
|-----|---------------------|
| End | Lat: 50 ° 41 346 N  |
|     | Lon: 129 ° 28 745 W |

**End**

|                                  |                            |
|----------------------------------|----------------------------|
| <b>Oxygen Info For This Cast</b> |                            |
| Blank Value:                     | _____ mL • L <sup>-1</sup> |
| Std Value:                       | _____ mL • L <sup>-1</sup> |
| *Date Run:                       | ____   ____   ____         |
| Analyst:                         | <i>Ron L.</i>              |

\* Oxygen blanks and standards should be run daily, if possible

Version: 28 Feb 2008 *Flawless* Transmissometer to be cleaned before each cast, do not use Ammonia products

<http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/>

Version: 28 Feb 2008

transmissometer to be cleaned before each cast, do not

115 Dup 11 9761 1123 2.252 yellow oxy