

ROSETTE LOG

MISSION ID: 2005-12

STATION: P2

CAST NUMBER: 2

UTC DATE (dd/mm/yyyy):

01 06 2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |                   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|-------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |                   |
| 1          | 2          | 364        | 2.429     | Bot 10            | ✓ 110              | ✓             | ✓   | ✓   |     |     |     |     |  |  |  |  |  |                   |
| 2          | 3          | 572        | 2.624     | 100               | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  | FLAKES BAD END PT |
| 3          | 4          | 657        | 4.052     | 75                | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  | FLAKES            |
| 4          | 5          | 708        | 4.386     | 75                | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  | FLAKES            |
| 5          | 6          | 709        | 4.491     | 50                | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  | FLAKES            |
| 6          | 7          | 715        | 5.379     | 25                | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  | FLAKES            |
| 7          | 8          | 727        | 6.916     | 10                | ✓                  | ✓             |     |     |     |     |     | ✓   |  |  |  |  |  |                   |
| 8          | 9          | 1105       | 6.939     | 5                 | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  |                   |
| 9          |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 10         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 11         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 12         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 13         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |                   |

SHIP: JOHN P TULLY  
ENTERED BY: MK  
CHECKED BY: DT

Bottom Depth:

Cast # down: 2  
Cast # up: 2

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 1000 | 1700 |
| Bottom: | 1002 | 1702 |
| End:    |      | 1713 |

START POSITION (GPS)  
LAT: 48 35 97  
LONG: 126 00 01

BOTTOM POSITION (GPS)  
LAT: 48 35 99  
LONG: 126 00 04

END POSITION (GPS)  
LAT: 48 36 05  
LONG: 126 00 09

Comments: OXYGEN: BLUE BOX - NUTRIENTS: BLUE RACK

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P4

CAST NUMBER: 7

UTC DATE (dd/mm/yyyy): 02/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |      |     |     |     |     |     |     |      |    |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|------|-----|-----|-----|-----|-----|-----|------|----|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAE           | DM'S | OXY | NUT | TCO | ALK | CI3 | CHL | DISP | CP |  |  |  |  |
| 1          | 11         |            |           | 200               | ✓ 201              | ✓             |      |     | ✓   |     |     |     |     |      |    |  |  |  |  |
| 2          | 12         |            |           | 175               | ✓                  | ✓             |      |     | ✓   |     |     |     | ✓   |      |    |  |  |  |  |
| 3          | 13         |            |           | 100               | ✓                  | ✓             |      |     | ✓   |     |     |     | ✓   |      |    |  |  |  |  |
| 4          | 14         |            |           | 75                | ✓                  | ✓             |      |     | ✓   |     |     |     | ✓   | ✓    | ✓  |  |  |  |  |
| 5          | 15         |            |           | 50                | ✓                  | ✓             |      |     | ✓   |     |     |     | ✓   |      |    |  |  |  |  |
| 6          | 16         |            |           | 40                | ✓                  | ✓             |      |     | ✓   |     |     |     |     |      |    |  |  |  |  |
| 7          | 17         |            |           | 40                | ✓                  |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 8          | 18         |            |           | 40                | ✓                  |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 9          | 19         |            |           | 30                |                    | ✓             |      |     | ✓   |     |     |     | ✓   | ✓    | ✓  |  |  |  |  |
| 10         | 20         |            |           | 25                |                    | ✓             |      |     | ✓   |     |     |     | ✓   | ✓    |    |  |  |  |  |
| 11         | 21         |            |           | 20                |                    | ✓             |      |     | ✓   |     |     |     | ✓   |      |    |  |  |  |  |
| 12         | 22         |            |           | 15                |                    | ✓             |      |     | ✓   |     |     |     | ✓   | ✓    | ✓  |  |  |  |  |
| 13         | 23         |            |           | 10                |                    | ✓             |      |     | ✓   |     |     |     | ✓   |      | ✓  |  |  |  |  |
| 14         | 24         |            |           | 5                 |                    | ✓             |      |     | ✓   |     |     |     | ✓   | ✓    |    |  |  |  |  |
| 15         | 25         |            |           | 0                 |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 16         | 26         |            |           | 0                 |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 17         | 27         |            |           | 0                 |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 18         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 19         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 20         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 21         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 22         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 23         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |
| 24         |            |            |           |                   |                    |               |      |     |     |     |     |     |     |      |    |  |  |  |  |

SHIP: TULLY  
ENTERED BY: M.R.  
CHECKED BY: H.M.

Bottom Depth: 1376

Cast # down: 87  
Cast # up:

Time LOC UTC  
Begin: 0120  
Bottom: 0127  
End: 0142

START POSITION (GPS)  
LAT: 48 38 11  
LONG: 126 31 19

BOTTOM POSITION (GPS)  
LAT: 48 38 83  
LONG: 126 40 09

END POSITION (GPS)  
LAT: 48 38 69  
LONG: 126 40 36

Comments: NUTRIENTS: ORANGE RACK

# ROSETTE LOG

MISSION ID: 2005-12 STATION: P4 CAST NUMBER: 11 UTC DATE (dd/mm/yyyy): 2/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |  |  |  |  |   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|---|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL | GLC |  |  |  |  |   |
| 1          | 28         | 1136       | 0.568     | Bot-20            | ✓                  | 1310          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |  |  |  |  | F |
| 2          | 29         | 1137       | 0.460     | 1250              | ✓                  |               | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |  |  |  |  |   |
| 3          | 30         | 1385       | 0.291     | 1000              | ✓                  |               | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |  |  |  |  |   |
| 4          | 31         | 1386       | 0.272     | 800               | ✓                  |               |     | ✓   | ✓   |     |     |     |     |  |  |  |  |   |
| 5          | 32         | 1389       | 0.244     | 800               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 6          | 33         | 1391       | 0.456     | 600               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 7          | 34         | 1393       | 1.136     | 400               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 8          | 35         | 1394       | 1.663     | 300               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 9          | 36         | 1397       | 2.047     | 250               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 10         | 37         | 1398       | 3.754     | 200               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 11         | 38         | 1399       | 2.673     | 175               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 12         | 39         | 1400       | 3.375     | 150               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 13         | 40         | 1402       | 3.501     | 125               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 14         | 41         | 1403       | 3.853     | 100               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 15         | 42         | 1404       | 4.364     | 75                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 16         | 43         | 1406       | 6.675     | 50                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 17         | 44         | 1410       | 6.924     | 25                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 18         | 45         | 1411       | 6.675     | 10                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 19         | 46         | 1424       | 6.678     | 5                 | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |   |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |   |

Comments: OXYGEN: RED BOX; NUTRIENTS: RED RACK

SHIP: J.R. TULLY  
 ENTERED BY: MR  
 CHECKED BY: MR

Bottom Depth: 1300

Cast # down: 11  
 Cast # up: 11

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0305 |
| Bottom: |     | 0327 |
| End:    |     | 0409 |

START POSITION (GPS)  
 LAT: 48 39.07  
 LONG: 126 40.07

BOTTOM POSITION (GPS)  
 LAT: 48 39.13  
 LONG: 126 40.44

END POSITION (GPS)  
 LAT: 48 38.74  
 LONG: 126 40.52

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P8

CAST NUMBER: 17

UTC DATE (dd/mm/yyyy):

03 06 2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |    |  |  |  |  |                   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|----|--|--|--|--|-------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL | CP |  |  |  |  |                   |
| 1          | 50         | 1188       | 1.509     | 2000              | ✓ 2004             | ✓             | ✓   | ✓   |     |     |     |     |    |  |  |  |  |                   |
| 2          | 51         | 1256       | 0.732     | 1500              | ✓                  | ✓             |     |     |     |     |     |     |    |  |  |  |  |                   |
| 3          | 52         | 1267       | 0.407     | 1250              | ✓                  | ✓             |     |     |     |     |     |     |    |  |  |  |  |                   |
| 4          | 53         | 1268       | 0.290     | 1000              | ✓                  |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 5          | 54         | 1272       | 0.344     | 800               | ✓ 700              |               |     |     |     |     |     |     |    |  |  |  |  | STOPPER NOT TIGHT |
| 6          | 55         | 1273       | 0.434     | 600               | ✓ 600              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 7          | 56         | 1274       | 0.464     | 600               | ✓ 600              |               |     |     |     |     |     |     |    |  |  |  |  | COMPUTER CRASH    |
| 8          | 57         | 1276       | N.S.      | 400               | ✓ 400              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 9          | 58         | 1278       | 1.906     | 300               | ✓ 301              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 10         | 59         | 1300       | 2.395     | 250               | ✓ 250              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 11         | 60         | 1301       | 2.803     | 200               | ✓ 201              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 12         | 61         | 1302       | 3.423     | 175               | ✓ 176              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 13         | 62         | 1305       | 3.632     | 150               | ✓ 150              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 14         | 63         | 1306       | 3.853     | 125               | ✓ 125              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 15         | 64         | 1307       | 4.239     | 100               | ✓ 100              |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 16         | 65         | 1309       | 5.837     | 75                | ✓ 75               |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 17         | 66         | 1310       | 6.574     | 50                | ✓ 50               |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 18         | 67         | 1311       | 6.654     | 25                | ✓ 25               |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 19         | 68         | 1313       | 6.660     | 10                | ✓ 10               |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 20         | 69         | 1314       | 6.673     | 5                 | ✓ 5                | ✓             | ✓   | ✓   |     |     |     | ✓   | ✓  |  |  |  |  |                   |
| 21         | 901        | 1315       | 6.673     | OUT               |                    |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 22         | 902        | 1317       | 6.719     | 14                |                    |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |    |  |  |  |  |                   |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |    |  |  |  |  |                   |

Comments: OXYGEN: GREEN BOX; NUTRIENTS: GREEN RACK

SHIP: JOHN P TULLY

ENTERED BY: MR

CHECKED BY:

Bottom Depth: 2513

Cast # down: 17

Cast # up:

Time LOC UTC

Begin: 2305 0605

Bottom:

End: 0017 0717

START POSITION (GPS)

LAT: 48 48.94

LONG: 128 40.14

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT: 48 48.904

LONG: 128 40.006



# ROSETTE LOG

MISSION ID: 2005-12

STATION: P12

CAST NUMBER: 22

UTC DATE (dd/mm/yyyy): 3/6/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |  |  |  |  |                  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL | CCO |  |  |  |  |                  |
| 1          | 73         | 1327       | 2.434     | Bot-20            | ✓                  | 3275          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  | BAD END PT.      |
| 2          | 74         | 1329       | 2.306     | 3000              | ✓                  | 3000          | ✓   | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |                  |
| 3          | 75         | 1417       | 1.874     | 2500              | ✓                  | 2500          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 4          | 76         | 1421       | 1.326     | 2000              | ✓                  | 2000          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 5          | 77         | 1435       | 0.614     | 1500              | ✓                  | 1500          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  | END AT COLLAPSED |
| 6          | 78         | 1438       | 0.289     | 1250              | ✓                  | 1251          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 7          | 79         | 1439       | 0.358     | 1250              | ✓                  | 1251          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 8          | 80         | 1440       | 0.255     | 1000              | ✓                  | 1001          | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 9          | 81         | 1441       | 0.272     | 800               | ✓                  | 801           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 10         | 82         | 1442       | 0.545     | 600               | ✓                  | 600           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 11         | 83         | 1443       | 1.409     | 400               | ✓                  | 401           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 12         | 84         | 1444       | 2.491     | 300               | ✓                  | 299           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 13         | 85         | 1445       | 3.034     | 250               | ✓                  | 250           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 14         | 86         | 1446       | 3.750     | 200               | ✓                  | 200           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 15         | 87         | 1447       | 4.261     | 175               | ✓                  | 175           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 16         | 88         | 1448       | 4.314     | 150               | ✓                  | 150           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 17         | 89         | 1449       | 4.591     | 125               | ✓                  | 124           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 18         | 90         | 1450       | 5.341     | 100               | ✓                  | 100           | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 19         | 91         | 1451       | 6.470     | 75                | ✓                  | 75            | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 20         | 92         | 1452       | 6.744     | 50                | ✓                  | 50            | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 21         | 93         | 1453       | 6.787     | 25                | ✓                  | 25            | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  | IFT END PT       |
| 22         | 94         | 1454       | 6.458     | 10                | ✓                  | 10            | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 23         | 95         | 1456       | 6.448     | 5                 | ✓                  | 5             | ✓   | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |                  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |                  |

Comments: OXYGEN: BLACK BOX; NUTRIENTS: WHITE RACK

SHIP: Tolly  
ENTERED BY:  
CHECKED BY:

Bottom Depth: 3222

Cast # down: 22  
Cast # up: 22

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 1235 | 1935 |
| Bottom: | 1321 | 2021 |
| End:    | 1426 | 2126 |

START POSITION (GPS)  
LAT: 48 58.118  
LONG: 130 39.893

BOTTOM POSITION (GPS)  
LAT: 48 58.931  
LONG: 130 39.931

END POSITION (GPS)  
LAT: 48 57.868  
LONG: 130 39.954

ROSETTE LOG

MISSION ID: 2005-12 STATION: P12 CAST NUMBER: 25 UTC DATE (dd/mm/yyyy): 03/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |   |     |     |     |     |     |    |   |   |  |         |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|---|-----|-----|-----|-----|-----|----|---|---|--|---------|
|            |            |            |           | Sample Depth      | Confirmed pressure | Sal           |     | NUT |   | TCO |     | C13 |     | DMS |    |   |   |  |         |
|            |            |            |           |                   |                    | DMS           | OXY |     |   |     | ALK |     | CHL |     | CA |   |   |  |         |
| 1          | 96         |            |           | 200               | ✓                  | 200           | ↓   |     | ↓ |     |     |     |     |     |    |   |   |  |         |
| 2          | 97         |            |           | 175               | ✓                  |               | ↓   |     | ↓ |     |     |     |     |     |    |   |   |  |         |
| 3          | 98         |            |           | 100               | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 4          | 99         |            |           | 75                | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 5          | 100        |            |           | 50                | ✓                  |               | ↓   |     | ↓ |     |     |     |     |     |    | ✓ | ✓ |  |         |
| 6          | 101        |            |           | 40                | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 7          | 102        |            |           | 40                | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  | Lindsay |
| 8          | 103        |            |           | 40                | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 9          | 104        |            |           | 30                | ✓                  |               | ↓   |     | ↓ |     |     |     |     |     |    | ✓ | ✓ |  |         |
| 10         | 105        |            |           | 25                | ✓                  |               |     |     |   |     |     |     |     |     |    | ✓ |   |  |         |
| 11         | 106        |            |           | 20                | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 12         | 107        |            |           | 15                | ✓                  |               |     |     |   |     |     |     |     |     |    | ✓ | ✓ |  |         |
| 13         | 108        |            |           | 10                | ✓                  |               |     |     |   |     |     |     |     |     |    |   | ✓ |  |         |
| 14         | 109        |            |           | 5                 | ✓                  |               | ↓   |     | ↓ |     |     |     |     |     |    | ✓ |   |  |         |
| 15         | 110        |            |           | 0                 | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 16         | 111        |            |           | 0                 | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  | Lindsay |
| 17         | 112        |            |           | 0                 | ✓                  |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 18         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 19         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 20         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 21         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 22         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 23         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |
| 24         |            |            |           |                   |                    |               |     |     |   |     |     |     |     |     |    |   |   |  |         |

Comments: NUTRIENTS: YELLOW RACK

SHIP: TULLY  
ENTERED BY: M.R.  
CHECKED BY: H.M.

Bottom Depth: 3275

Cast # down: 25  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2248 |
| Bottom: |     | 2252 |
| End:    |     | 2307 |

START POSITION (GPS)  
LAT: 48 58 27  
LONG: 130 39 89

BOTTOM POSITION (GPS)  
LAT: 48 58 33  
LONG: 130 39 86

END POSITION (GPS)  
LAT: 48 58 19  
LONG: 130 39 68

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P16

CAST NUMBER: 30

UTC DATE (dd/mm/yyyy):

05/06/05

MISSION ID: 2005-12 STATION: 12

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |   |     |     |     |     |     |     |      |                |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|---|-----|-----|-----|-----|-----|-----|------|----------------|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |   | TCO |     | C13 |     | CFC |     |      |                |  |
|            |            |            |           |                   |                    |               | OXY |     |   |     | ALK |     | CHL |     | DMS | DMSD |                |  |
| 1          | 116        | 364        | 2.885     | Bot-20            | ✓                  | 3696          | ✓   |     |   |     |     |     |     | ✓   |     |      |                |  |
| 2          | 117        | 572        | 2.745     | 3500              | ✓                  |               | ✓   |     |   |     |     |     |     |     |     |      |                |  |
| 3          | 118        | 657        | 2.457     | 3000              | ✓                  | 3004          | ✓   |     |   |     |     |     |     |     |     |      |                |  |
| 4          | 119        | 708        | 2.463     | 3000              | ✓                  | 3004          |     |     |   | ✓   |     |     |     |     |     |      | BAD END PT uhm |  |
| 5          | 120        | 709        | 2.150     | 2500              | ✓                  |               |     |     |   |     |     | ✓   |     | ✓   |     |      |                |  |
| 6          | 121        | 715        | 1.218     | 2000              | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 7          | 122        | 727        | 0.574     | 1500              | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 8          | 123        | 1105       | 0.350     | 1250              | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 9          | 124        | 1110       | 0.300     | 1000              | ✓                  |               |     |     |   |     |     |     |     |     |     |      | BAD END PT N   |  |
| 10         | 125        | 1126       | 0.386     | 800               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 11         | 126        | 1128       | 0.552     | 600               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 12         | 127        | 1130       | 1.180     | 400               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 13         | 128        | 1134       | 1.674     | 300               | ✓                  |               |     |     |   |     |     |     |     |     |     |      | BAD END PT N   |  |
| 14         | 129        | 1135       | 1.928     | 250               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 15         | 130        | 1138       | 2.512     | 200               | ✓                  |               |     |     | ✓ |     |     |     |     |     | ✓   |      | BAD END PT N   |  |
| 16         | 131        | 1142       | 2.883     | 175               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 17         | 132        | 1146       | 3.430     | 150               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 18         | 133        | 1158       | 3.802     | 125               | ✓                  |               |     |     |   |     |     |     |     |     |     |      |                |  |
| 19         | 134        | 1175       | 4.653     | 100               | ✓                  |               |     |     |   |     |     |     | ✓   |     | ✓   |      |                |  |
| 20         | 135        | 1176       | 6.667     | 75                | ✓                  |               |     |     |   |     |     |     |     |     | ✓   | ✓    |                |  |
| 21         | 136        | 1192       | 6.654     | 50                | ✓                  |               |     |     |   |     |     |     |     |     | ✓   | ✓    | BAD END PT N   |  |
| 22         | 137        | 1195       | 6.689     | 25                | ✓                  |               |     |     |   |     |     |     |     |     | ✓   | ✓    | NO BOTTLE TRIP |  |
| 23         | 138        | 1206       | N.S.      | 10                | ✓                  |               |     |     |   |     |     |     |     | ✓   | ✓   | ✓    | NO BOTTLE TRIP |  |
| 24         | 139        | 1212       | N.S.      | 5                 | ✓                  |               |     |     |   |     |     |     |     |     | ✓   | ✓    |                |  |

SHIP: TULLY

ENTERED BY: H.R.

CHECKED BY: H.R.

Bottom Depth: 3614

Cast # down: 30

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0049 |
| Bottom: |     | 0148 |
| End:    |     | 0253 |

| START POSITION (GPS) |     |       |
|----------------------|-----|-------|
| LAT:                 | 49  | 16 81 |
| LONG:                | 134 | 39 46 |

| BOTTOM POSITION (GPS) |     |       |
|-----------------------|-----|-------|
| LAT:                  | 49  | 17 36 |
| LONG:                 | 134 | 39 46 |

| END POSITION (GPS) |     |       |
|--------------------|-----|-------|
| LAT:               | 49  | 18 15 |
| LONG:              | 134 | 39 43 |

Comments: OXYGEN: BLUE BOX; NUTRIENTS: BLUE RACK



# ROSETTE LOG

MISSION ID: 2005-12

STATION: P20

CAST NUMBER: 34

UTC DATE (dd/mm/yyyy):

SHALLOW CAST

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |    |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|----|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL | DMS | CA |  |  |  |  |  |
| 1          | 143        |            |           | 200               | ✓ 200              | ✓             |     | ✓   |     |     |     |     |     |    |  |  |  |  |  |
| 2          | 144        |            |           | 175               | ✓ 174              | ✓             |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 3          | 145        |            |           | 100               | ✓ 99               | ✓             |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 4          | 146        |            |           | 75                | ✓ 74               | ✓             |     |     |     |     |     |     | ✓   | ✓  |  |  |  |  |  |
| 5          | 147        |            |           | 50                | ✓ 50               | ✓             |     |     |     |     |     |     | ✓   | ✓  |  |  |  |  |  |
| 6          | 148        |            |           | 40                | ✓ 40               | ✓             |     |     |     |     |     |     | ✓   | ✓  |  |  |  |  |  |
| 7          | 149        |            |           | 30                | ✓ 29               | ✓             |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 8          | 150        |            |           | 25                | ✓ 25               | ✓             |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 9          | 151        |            |           | 20                | ✓ 20               | ✓             |     |     |     |     |     |     | ✓   |    |  |  |  |  |  |
| 10         | 152        |            |           | 15                | ✓ 15               | ✓             |     |     |     |     |     |     | ✓   | ✓  |  |  |  |  |  |
| 11         | 153        |            |           | 10                | ✓ 10               | ✓             |     |     |     |     |     |     |     | ✓  |  |  |  |  |  |
| 12         | 154        |            |           | 5                 | ✓ 5                | ✓             |     |     |     |     |     |     | ✓   |    |  |  |  |  |  |
| 13         | 155        |            |           | 0                 | ✓ 0                | ✓             |     |     |     |     |     |     | ✓   |    |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |  |  |  |  |  |

Comments: NUTRIENTS: ORANGE RACK

SHIP: Tully

ENTERED BY: DY

CHECKED BY:

Bottom Depth: 3934

Cast # down: 34

Cast # up: 34

Time LOC UTC

Begin: 0027 0727

Bottom: 0031 0731

End:

START POSITION (GPS)

LAT: 489 33.988

LONG: 138 39.995

BOTTOM POSITION (GPS)

LAT: 49 33.989

LONG: 138 39.973

END POSITION (GPS)

LAT:

LONG:



# ROSETTE LOG

MISSION ID: 2005-12

STATION: P20

CAST NUMBER: 38

UTC DATE (dd/mm/yyyy): 6/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. m/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |  |  |  |  |  |                           |
|------------|------------|------------|----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|---------------------------|
|            |            |            |          | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL | CFU |  |  |  |  |  |                           |
| 1          | 156        | 1136       | No DATA  | Bot-20            | ✓ 4018             | ✓             | ✓   | ✓   | ✓   |     |     |     | ✓   |  |  |  |  |  | BUBBLE ON LENS BAD END PT |
| 2          | 157        | 1137       | 2.852    | 3500              | ✓ 3500             | ✓             |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 3          | 158        | 1385       | 2.495    | 3000              | ✓ 3000             | ✓             |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 4          | 159        | 1386       | 1.971    | 2500              | ✓ 2499             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 5          | 160        | 1389       | 1.247    | 2000              | ✓ 2001             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 6          | 161        | 1391       | 0.538    | 1500              | ✓ 1500             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 7          | 162        | 1393       | 0.528    | 1500              | ✓ 1500             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 8          | 163        | 1394       | 0.303    | 1250              | ✓ 1249             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 9          | 164        | 1397       | 0.271    | 1000              | ✓ 1000             |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 10         | 165        | 1398       | 0.432    | 800               | ✓ 799              |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 11         | 166        | 1399       | 0.654    | 600               | ✓ 600              |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 12         | 167        | 1400       | 1.471    | 400               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 13         | 168        | 1402       | 2.292    | 300               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 14         | 169        | 1403       | 2.642    | 250               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 15         | 170        | 1404       | 4.506    | 200               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 16         | 171        | 1406       | 4.164    | 175               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 17         | 172        | 1410       | 5.686    | 150               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 18         | 173        | 1411       | 6.178    | 125               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 19         | 174        | 1424       | 6.711    | 100               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 20         | 175        | 1425       | 6.793    | 75                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 21         | 176        | 1426       | 6.766    | 50                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 22         | 177        | 1427       | 6.667    | 25                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 23         | 178        | 1428       | 6.668    | 10                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |
| 24         | 179        | 1429       | 6.662    | 5                 |                    |               |     |     |     |     |     |     |     |  |  |  |  |  |                           |

Comments: OXYGEN: RED BOX; NUTRIENTS: RED RACK.

SHIP: Tully

ENTERED BY: [Signature]

CHECKED BY: [Signature]

Bottom Depth:

Cast # down: 38

Cast # up: 38

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0900 |
| Bottom: |     | 1001 |
| End:    |     | 1116 |

| START POSITION (GPS) |            |
|----------------------|------------|
| LAT:                 | 49 33.992  |
| LONG:                | 138 40.064 |

| BOTTOM POSITION (GPS) |            |
|-----------------------|------------|
| LAT:                  | 49 33.984  |
| LONG:                 | 138 40.054 |

| END POSITION (GPS) |           |
|--------------------|-----------|
| LAT:               | 49.34 02  |
| LONG:              | 138 40 07 |

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P21

CAST NUMBER: 39

UTC DATE (dd/mm/yyyy):

6 6 2005

MISSION ID: 2005-12

STATION: 12

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|---|-----|---|-----|---|-----|---|-----|---|---|-----------------------------------------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |   | TCO |   | C13 |   | DMS |   | DMS |   |   |                                                           |
|            |            |            |           |                   |                    | OXY           |   |     |   | ALK |   | CHL |   | CA  |   |     |   |   |                                                           |
| 1          | 180        | 1188       | 1.232     | 2000              | ✓ 1999             | ✓             | ✓ | ✓   |   | ✓   |   |     |   |     |   |     |   |   | Came up to 1950 then back down to 2000 for bottle whoops! |
| 2          | 181        | 1256       | 0.499     | 1500              | ✓ 1500             | ✓             | ✓ | ✓   |   | ✓   |   |     |   |     |   |     |   |   |                                                           |
| 3          | 182        | 1267       | 0.330     | 1250              | ✓                  |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 4          | 183        | 1268       | 0.290     | 1000              | ✓ 1000             |               |   |     |   | ✓   |   |     |   |     |   |     |   |   |                                                           |
| 5          | 184        | 1272       | 0.368     | 800               | ✓ 801              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 6          | 185        | 1273       | 0.716     | 600               | ✓ 600              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 7          | 186        | 1274       | 1.609     | 400               | ✓ 399              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 8          | 187        | 1276       | 1.965     | 300               | ✓ 301              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 9          | 188        | 1278       | 1.960     | 250               | ✓ 250              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 10         | 189        | 1300       | 2.215     | 200               | ✓ 201              |               |   |     | ✓ |     |   |     |   |     |   |     |   |   |                                                           |
| 11         | 190        | 1301       | 2.317     | 175               | ✓ 175              |               |   |     |   |     |   |     |   |     | ✓ | ✓   |   |   |                                                           |
| 12         | 191        | 1302       | 2.698     | 150               | ✓ 151              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 13         | 192        | 1305       | 3.247     | 125               | ✓ 124              |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 14         | 193        | 1306       | 5.136     | 100               | ✓ 101              |               |   |     |   |     |   |     |   |     | ✓ | ✓   |   |   |                                                           |
| 15         | 194        | 1307       | 6.634     | 75                | ✓ 76               |               |   |     |   |     |   |     |   |     |   |     | ✓ | ✓ |                                                           |
| 16         | 195        | 1309       | 6.788     | 50                | ✓ 48               |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 17         | 196        | 1310       | 6.877     | 40                | ✓ 39               |               |   |     |   | X   |   |     |   |     |   |     |   |   |                                                           |
| 18         | 197        | 1311       | 6.679     | 30                | ✓ 29               |               |   |     |   | X   |   |     |   |     |   |     | ✓ | ✓ |                                                           |
| 19         | 198        | 1313       | 6.572     | 25                | ✓ 24               |               |   |     |   |     |   |     |   |     |   |     |   |   |                                                           |
| 20         | 199        | 1314       | 6.679     | 20                | ✓ 21               |               |   |     |   | X   |   |     |   |     |   |     |   |   |                                                           |
| 21         | 200        | 1315       | 6.678     | 15                | ✓ 14               |               |   |     |   | X   |   |     |   |     |   |     |   |   |                                                           |
| 22         | 201        | 1317       | 6.673     | 10                | ✓ 11               |               |   |     |   |     |   |     |   |     |   |     | ✓ | ✓ |                                                           |
| 23         | 202        | 1318       | 6.687     | 5                 | ✓ 5                |               |   |     |   |     |   |     |   |     |   |     | ✓ |   |                                                           |
| 24         | 203        | 1319       | 6.671     | 0                 |                    |               |   |     |   | ✓   | ✓ | ✓   | ✓ | ✓   | ✓ | ✓   | ✓ | ✓ |                                                           |

GOVERN RACK

SHIP: JOHN P. TULLY

ENTERED BY: MR

CHECKED BY:

Bottom Depth: 3925

Cast # down: 39

Cast # up:

Time LOC UTC

Begin: 0941 1641

Bottom: 1009 1709

End: 1806

START POSITION (GPS)

LAT: 49 38 00

LONG: 139 39 95

BOTTOM POSITION (GPS)

LAT: 49 37 95

LONG: 139 40 002

END POSITION (GPS)

LAT: 49 37 99

LONG: 139 39 89

Comments: OXYGEN: GREEN BOX; NUTRIENTS: GREEN RACK

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P26 / Solas

CAST NUMBER: 40

UTC DATE (dd/mm/yyyy): 07/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |  |  |
| 1          | 209        | 132.7      | 3.447     | 200               | ✓                  | 200           | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 2          | 210        | 132.9      | 4.051     | 175               | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 3          | 211        | 141.7      | 6.435     | 100               | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 4          | 212        | 142.1      | 6.897     | 75                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 5          | 213        | 143.5      | 7.025     | 50                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 6          | 214        | 143.7      | 7.041     | 40                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 7          | 215        |            |           | 40                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 8          | 216        |            |           | 40                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 9          | 217        |            |           | 40                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 10         | 218        |            |           | 40                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 11         | 219        | 144.3      | 6.809     | 30                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 12         | 220        | 144.4      | N.S.      | 25                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 13         | 221        | 144.5      | 6.829     | 20                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 14         | 222        | 144.6      | 6.781     | 15                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 15         | 223        | 144.7      | 6.804     | 10                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 16         | 224        | 144.8      | 6.783     | 5                 | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 17         | 225        | 144.9      | 6.808     | 0                 |                    |               | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |  |
| 18         | 226        |            |           | 0                 |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 19         | 227        |            |           | 0                 |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 20         | 228        |            |           | 0                 |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 21         | 229        |            |           | 0                 |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 23         | 903        | 143.9      | 6.808     | OUT               |                    | PHIL'S        |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 24         | 904        | 144.0      | 6.808     | IN                |                    | PHIL'S        |     |     |     |     |     |     |  |  |  |  |  |  |  |

Comments: OXYGEN: BLACK BOX NUTRIENTS LABELLED

SHIP: TOLLIT

ENTERED BY: MR

CHECKED BY: HM

Bottom Depth: 42.10

Cast # down: 48

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2254 |
| Bottom: |     | 2259 |
| End:    |     | 2316 |

| START POSITION (GPS) |         |    |
|----------------------|---------|----|
| LAT:                 | 50 00.4 | 59 |
| LONG:                | 144 58  | 72 |

| BOTTOM POSITION (GPS) |          |    |
|-----------------------|----------|----|
| LAT:                  | 50 00.58 |    |
| LONG:                 | 144 58   | 68 |

| END POSITION (GPS) |           |  |
|--------------------|-----------|--|
| LAT:               | 50 00.61  |  |
| LONG:              | 144 58.85 |  |



# ROSETTE LOG

MISSION ID: 2005-12

STATION: P26

CAST NUMBER: 50

UTC DATE (dd/mm/yyyy):

8/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |      |    |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|------|----|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAE           | OXY | NUT | TCO | ALK | C13 | CHL | DMSP | CP |  |  |  |  |  |
| 1          | 230        |            |           | 200               | ✓                  | 200           | ✓   |     |     |     |     |     |      |    |  |  |  |  |  |
| 2          | 231        |            |           | 175               | ✓                  | 175           | ✓   |     |     |     |     |     |      |    |  |  |  |  |  |
| 3          | 232        |            |           | 100               | ✓                  | 100           | ✓   |     |     |     |     |     |      |    |  |  |  |  |  |
| 4          | 233        |            |           | 75                | ✓                  | 75            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 5          | 234        |            |           | 50                | ✓                  | 50            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 6          | 235        |            |           | 40                | ✓                  | 40            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 7          | 236        |            |           | 30                | ✓                  | 29            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 8          | 237        |            |           | 25                | ✓                  | 25            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 9          | 238        |            |           | 20                | ✓                  | 20            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 10         | 239        |            |           | 15                | ✓                  | 15            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 11         | 240        |            |           | 10                | ✓                  | 10            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 12         | 241        |            |           | 5                 | ✓                  | 4.8           | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 13         | 242        |            |           | 0                 | ✓                  | 71            | ✓   |     |     |     |     |     | ✓    | ✓  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |    |  |  |  |  |  |

SHIP: JOHN P. TULLY

ENTERED BY: M.R.

CHECKED BY: DT

Bottom Depth: 4211

Cast # down: 50

Cast # up:

Time LOC UTC

Begin: 2044 0344

Bottom:

End: 0404

START POSITION (GPS)

LAT: 49 59 9.9

LONG: 145 00 040

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT: 50 00 31.3

LONG: 145 00 069

Comments: NUTRIENTS: LABELLED



# ROSETTE LOG

MISSION ID: 2005-12

STATION: P26

**CAST NUMBER:**

UTC DATE (dd/mm/yyyy):

8/6/2005

SHIP: J.P. TULLY

ENTERED BY: *MA 12*

CHECKED BY: DT/DY

Bottom Depth: 4210

Cast # down: 52

Cast # up: 52

| Time | LOC | UTC |
|------|-----|-----|
|------|-----|-----|

Begin: 1025 pm 0525

Bottom: 1126 pri 0626

End: 1800

START POSITION (GPS)

LAT: 50 00 085

LONG: 144 59.932

BOTTOM POSITION (GPS)

LAT: 50 50 36'

LONG: 14 500 785

END POSITION (GPS)

LAT: 50:00.328

LONG: 145 00.983

Comments: OXYGEN BLUE BOX, NUTRIENTS: BLUE LEAF

## ROSETTE LOG

MISSION ID: 2005-12

STATION: P26

CAST NUMBER: 53

UTC DATE (dd/mm/yyyy): 8/6/2005

| Niskin<br>No. | Sample<br>No. | OXY.<br>Flask | OXY.<br>ml/l | ROSETTE OPERATION |                       | Samples taken |     |     |  |     |  |     |  |     |  |  |  |  |  |
|---------------|---------------|---------------|--------------|-------------------|-----------------------|---------------|-----|-----|--|-----|--|-----|--|-----|--|--|--|--|--|
|               |               |               |              | Sample<br>Depth   | Confirmed<br>pressure | SAL           |     | NUT |  | TCO |  | C13 |  | DMS |  |  |  |  |  |
|               |               |               |              |                   |                       | DMS           | OXY |     |  | ALK |  | CHL |  |     |  |  |  |  |  |
| 1             | 267           |               |              | 200               | ✓ 200                 | ✓             |     | ✓   |  |     |  |     |  |     |  |  |  |  |  |
| 2             | 268           |               |              | 175               | ✓ 175                 | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 3             | 269           |               |              | 100               | ✓ 100                 | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 4             | 270           |               |              | 75                | ✓ 75                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 5             | 271           |               |              | 50                | ✓ 50                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 6             | 272           |               |              | 40                | ✓ 40                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 7             | 273           |               |              | 30                | ✓ 30                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 8             | 274           |               |              | 25                | ✓ 24                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 9             | 275           |               |              | 20                | ✓ 20                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 10            | 276           |               |              | 15                | ✓ 15                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 11            | 277           |               |              | 10                | ✓ 10                  | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 12            | 278           |               |              | 5                 | ✓ 4                   | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 13            | 279           |               |              | 0                 | ✓ 2                   | ✓             |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 14            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 15            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 16            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 17            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 18            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 19            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 20            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 21            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 22            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 23            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |
| 24            |               |               |              |                   |                       |               |     |     |  |     |  |     |  |     |  |  |  |  |  |

Comments: NUTRIENTS: ORANGE RACE

SHIP: Tully

ENTERED BY: BY

CHECKED BY:

Bottom Depth: 4213

Cast # down: 53

Cast # up: 53

Time LOC UTC

Begin: 0241 0941

Bottom: 0244 0944

End: 0957

START POSITION (GPS)

LAT: 50 0.013

LONG: 144 59.974

BOTTOM POSITION (GPS)

LAT: 50 0.017

LONG: 145 0.012

END POSITION (GPS)

LAT: 50 00 024

LONG: 145 00.001

# ROSETTE LOG

MISSION ID: 2005-12

STATION: P 32

CAST NUMBER: 65

UTC DATE (dd/mm/yyyy):

13 06 2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |  |     |  |     |  |     |  |   |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|--|-----|--|-----|--|-----|--|---|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |  | NUT |  | TCO |  | C13 |  |   |  |  |  |  |
| 1          | 280        |            |           | 3000              | 3005               | ✓             |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 2          | 281        |            |           | 3000              |                    |               |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 3          | 282        |            |           | 3000              |                    |               |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 4          | 283        |            |           | "                 |                    |               |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 5          | 284        |            |           | "                 |                    |               |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 6          | 285        |            |           | "                 |                    |               |  |     |  | ✓   |  |     |  |   |  |  |  |  |
| 7          | 286        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 8          | 287        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 9          | 288        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 10         | 289        |            |           | 3000              |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 11         | 290        |            |           | 3000              |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 12         | 291        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 13         | 292        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 14         | 293        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 15         | 294        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 16         | 295        |            |           | 3000              |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 17         | 296        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 18         | 297        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 19         | 298        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 20         | 299        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 21         | 300        |            |           | "                 |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 22         | 301        |            |           | 3000              |                    |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 23         | 302        |            |           | 3000              | 3004               |               |  |     |  |     |  |     |  |   |  |  |  |  |
| 24         | 303        |            |           | 5                 | 5                  | ✓             |  | ✓   |  |     |  |     |  | ✓ |  |  |  |  |

SHIP:

ENTERED BY:

CHECKED BY:

Bottom Depth: 4218

Cast # down: 65

Cast # up: 65

Time LOC UTC

Begin: 2017 0317

Bottom: 2055 0355

End: 2133 0433

START POSITION (GPS)

LAT: 50 53 981

LONG: 145 00 041

BOTTOM POSITION (GPS)

LAT: 50 53 909

LONG: 144 59 903

END POSITION (GPS)

LAT: 50 54 242

LONG: 144 59 341

Comments:



# ROSETTE LOG

MISSION ID: 2005-12

STATION: W3

CAST NUMBER: 68

UTC DATE (dd/mm/yyyy): 13/06/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |      |   |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|------|---|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL | DMSO |   |  |  |  |  |  |
| 1          | 306        | 1136       | 1.375     | 2000              | ✓ 2005             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 2          | 307        | 1137       | 0.573     | 1500              | ✓ 1500             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 3          | 308        | 1385       | 0.386     | 1250              | ✓ 1251             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 4          | 309        | 1386       | 0.332     | 1000              | ✓ 1000             |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 5          | 310        | 1389       | 0.431     | 800               | ✓ 800              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 6          | 311        | 1391       | 0.598     | 600               | ✓ 600              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 7          | 312        | 1393       | 1.060     | 400               | ✓ 400              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 8          | 313        | 1394       | 1.610     | 300               | ✓ 299              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 9          | 314        | 1397       | 2.122     | 250               | ✓ 249              |               |     | ✓   |     |     |     |     |      |   |  |  |  |  |  |
| 10         | 315        | 1398       | 2.925     | 200               | ✓ 199              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 11         | 316        | 1399       | 3.502     | 175               | ✓ 174              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 12         | 317        | 1400       | 4.065     | 150               | ✓ 150              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 13         | 318        | 1402       | 5.076     | 125               | ✓ 124              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 14         | 319        | 1403       | 6.164     | 100               | ✓ 99               |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 15         | 320        | 1404       | 6.836     | 75                | ✓ 74               |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 16         | 321        | 1406       | 7.031     | 50                | ✓ 49               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 17         | 322        | 1410       | 6.733     | 30                | ✓ 29               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 18         | 323        | 1411       | 6.724     | 25                | ✓ 25               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 19         | 324        | 1424       | 6.747     | 20                | ✓ 20               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 20         | 325        | 1425       | 6.714     | 10                | ✓ 10               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 21         | 326        | 1426       | 6.689     | 5                 | ✓ 5                | ✓             |     | ✓   |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 22         | 327        | 1427       | 6.681     | 0                 |                    |               |     | ✓   |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |

Comments: OXYGEN: RED BOX; NUTRIENTS: RED RACK

SHIP: Tully

ENTERED BY: [Signature]

CHECKED BY:

Bottom Depth: 3715

Cast # down: 68

Cast # up: 68

Time LOC UTC

Begin: 1404 2104

Bottom: 1452 2132

End:

START POSITION (GPS)

LAT: 51 47.978

LONG: 141 23.999

BOTTOM POSITION (GPS)

LAT: 51 47.870

LONG: 141 24.319

END POSITION (GPS)

LAT:

LONG:

# ROSETTE LOG

MISSION ID: 2005-12

STATION: W6

CAST NUMBER: 72

UTC DATE (dd/mm/yyyy): 14/06/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |      |   |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|------|---|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL | DMSP |   |  |  |  |  |  |
| 1          | 330        | 1188       | 1.312     | 2000              | ✓ 1909             | ✓             | ✓   | ✓   |     |     |     |     |      |   |  |  |  |  |  |
| 2          | 331        | 1256       | 0.611     | 1500              | ✓ 1500             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 3          | 332        | 1267       | 0.396     | 1250              | ✓ 1249             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 4          | 333        | 1268       | 0.291     | 1000              | ✓ 1002             |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 5          | 334        | 1272       | 0.536     | 800               | ✓ 800              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 6          | 335        | 1273       | 0.517     | 600               | ✓ 599              |               |     | ✓   |     |     |     |     |      |   |  |  |  |  |  |
| 7          | 336        | 1274       | 1.158     | 400               | ✓ 399              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 8          | 337        | 1276       | 1.859     | 300               | ✓ 300              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 9          | 338        | 1278       | 2.348     | 250               | ✓ 251              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 10         | 339        | 1300       | 3.001     | 200               | ✓ 202              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 11         | 340        | 1301       | 3.790     | 175               | ✓ 174              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 12         | 341        | 1302       | 4.246     | 150               | ✓ 151              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 13         | 342        | 1305       | 5.135     | 125               | ✓ 126              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 14         | 343        | 1306       | 6.635     | 100               | ✓ 99               |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 15         | 344        | 1307       | 6.797     | 75                | ✓ 75               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 16         | 345        | 1309       | 7.057     | 50                | ✓ 50               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 17         | 346        | 1310       | 6.746     | 30                | ✓ 30               |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 18         | 347        | 1311       | 6.681     | 25                | ✓ 25               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 19         | 348        | 1313       | 6.738     | 20                | ✓ 20               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 20         | 349        | 1314       | 6.629     | 10                | ✓ 10               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 21         | 350        | 1315       | 6.624     | 5                 | ✓ 5                | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 22         | 351        | 1317       | 6.578     | 0                 | ✓ 1                | ✓             | ✓   | ✓   |     |     |     |     | ✓    | ✓ |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |

Comments: OXYGEN: GREEN Box ; NUTRIENTS: GREEN RACK.

SHIP: Tully  
 ENTERED BY: MD/DT  
 CHECKED BY:

Bottom Depth: 3540

Cast # down: 72  
 Cast # up:

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 922  | 1622 |
| Bottom: | 949  | 1649 |
| End:    | 1049 | 1734 |

START POSITION (GPS)  
 LAT: 52 18 479  
 LONG: 137 19 954

BOTTOM POSITION (GPS)  
 LAT: 52 18 481  
 LONG: 137 20 083

END POSITION (GPS)  
 LAT: 52 18 565  
 LONG: 137 20 269

# ROSETTE LOG

MISSION ID: 2005-12

STATION: W8

CAST NUMBER: 74

UTC DATE (dd/mm/yyyy): 15/06/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |   |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|---|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |   |  |  |  |  |  |  |
| 1          | 353        | 364        | 1.341     | 2000              | ✓                  | ✓             | ✓   | ✓   |     |     |     |     |   |  |  |  |  |  |  |
| 2          | 354        | 572        | 0.603     | 1500              | ✓                  | ✓             |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 3          | 355        | 657        | 0.448     | 1250              | ✓                  | ✓             |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 4          | 356        | 708        | 0.296     | 1000              | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 5          | 357        | 709        | 0.312     | 800               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 6          | 358        | 715        | 0.564     | 600               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 7          | 359        | 727        | 1.240     | 400               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 8          | 360        | 1105       | 1.995     | 300               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 9          | 361        | 1110       | 2.384     | 250               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 10         | 362        | 1126       | 3.146     | 200               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 11         | 363        | 1128       | 3.695     | 175               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 12         | 364        | 1130       | 4.216     | 150               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 13         | 365        | 1134       | 4.461     | 125               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 14         | 366        | 1135       | 4.531     | 100               | ✓                  |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 15         | 367        | 1138       | 6.144     | 75                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 16         | 368        | 1142       | 6.402     | 50                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 17         | 369        | 1146       | 6.593     | 30                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 18         | 370        | 1158       | 6.676     | 25                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 19         | 371        | 1175       | 6.799     | 20                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 20         | 372        | 1176       | 6.754     | 10                | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 21         | 373        | 1192       | 6.729     | 5                 | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 22         | 374        | 1195       | 6.681     | 0                 | ✓                  |               |     |     |     |     |     | ✓   | ✓ |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |   |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |   |  |  |  |  |  |  |

Comments: OXYGEN BLUE BOX; NUTRIENTS: BLUE RACK

SHIP:

ENTERED BY:

CHECKED BY:

Bottom Depth: 2979

Cast # down: 74

Cast # up:

Time LOC UTC

Begin: 2150 0450

Bottom: 2215 0515

End: 2307 0607

START POSITION (GPS)

LAT: 52 38 519

LONG: 134 40 026

BOTTOM POSITION (GPS)

LAT: 52 38 593

LONG: 134 39 917

END POSITION (GPS)

LAT: 52 38 604

LONG: 134 39 516



# ROSETTE LOG

MISSION ID: 2005-12 STATION: E00Y 05 CAST NUMBER: 76

UTC DATE (dd/mm/yyyy):

15/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL | DMG |  |  |  |  |  |  |
| 1          | 376        | 1136       | 1.338     | 2000              | ✓ 2000             | ✓             |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 2          | 377        | 1137       | 0.536     | 1500              | ✓                  | ✓             |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 3          | 378        | 1385       | 0.339     | 1250              | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 4          | 379        | 1386       | 0.332     | 1000              | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 5          | 380        | 1389       | 0.478     | 800               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 6          | 381        | 1391       | 1.180     | 600               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 7          | 382        | 1393       | 1.844     | 400               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 8          | 383        | 1394       | 2.039     | 300               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 9          | 384        | 1397       | 2.229     | 250               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 10         | 385        | 1398       | 2.361     | 200               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 11         | 386        | 1399       | 2.697     | 175               | ✓ 150              |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 12         | 387        | 1400       | 2.716     | 150               | ✓ 150              |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 13         | 388        | 1402       | 3.740     | 125               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 14         | 389        | 1403       | 4.734     | 100               | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 15         | 390        | 1404       | 5.944     | 75                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 16         | 391        | 1406       | N.S.      | 50                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 17         | 392        | 1410       | 7.069     | 30                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 18         | 393        | 1411       | 7.113     | 25                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 19         | 394        | 1424       | 7.174     | 20                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 20         | 395        | 1425       | 6.918     | 10                | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 21         | 396        | 1426       | 6.810     | 5                 | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 22         | 397        | 1427       | 6.833     | 0                 | ✓                  |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |  |  |  |  |  |  |

SHIP: TULLY  
 ENTERED BY: M R  
 CHECKED BY: H M

Bottom Depth: 2853

Cast # down: 76

Cast # up:

| Time    | LOC         | UTC         |
|---------|-------------|-------------|
| Begin:  | <u>447</u>  | <u>1147</u> |
| Bottom: | <u>0515</u> | <u>1215</u> |
| End:    | <u>0606</u> | <u>1306</u> |

START POSITION (GPS)  
 LAT: 52 48 04  
 LONG: 133 29 95

BOTTOM POSITION (GPS)  
 LAT: 52 47 96  
 LONG: 133 29 97

END POSITION (GPS)  
 LAT: 52 48 05  
 LONG: 133 30 02

Comments: OXYGEN: RED BOX; NUTRIENTS: ORANGE BOX

# ROSETTE LOG

MISSION ID: 2005-12

STATION: 550

CAST NUMBER: 82

UTC DATE (dd/mm/yyyy): 16/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |    |     |     |     |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL | PO4 | PH | PHB | PHC | PHD |  |
| 1          | 399        |            |           | 50                | ✓ 50               |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 2          | 400        |            |           | 30                | ✓ 30               |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 3          | 401        |            |           | 20                | ✓ 21               |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 4          | 402        |            |           | 10                | ✓ 10               |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 5          | 403        |            |           | 5                 | ✓ 5                |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 6          | 404        |            |           | 0                 | ✓ 1                |               |     | ✓   |     |     |     | ✓   | ✓   | ✓  | ✓   |     |     |  |
| 7          |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 8          |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 9          |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 10         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 11         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 12         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 13         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |    |     |     |     |  |

Comments: NUTRIENTS LABELLED

SHIP: Tully

ENTERED BY:

CHECKED BY:

Bottom Depth: 2026

Cast # down: 82

Cast # up: 82

Time LOC UTC

Begin: 0218 0918

Bottom: 0945

End: 1017

START POSITION (GPS)

LAT: 50 59.990

LONG: 130 52.216

BOTTOM POSITION (GPS)

LAT: 51 00.03

LONG: 130 50.21

END POSITION (GPS)

LAT: 50 59.98

LONG: 130 50.23

ROSETTE LOG

MISSION ID: 2005-12

STATION: 551

CAST NUMBER: 84

UTC DATE (dd/mm/yyyy):

16/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|------|---|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL | DMSP |   |  |  |  |  |  |  |
| 1          | 405        | 364        | 0.912     | Bot-20            | ✓ 4.88             | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 2          | 406        | 572        | 1.087     | 400               | ✓ 400              | ✓             |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 3          | 407        | 657        | 1.663     | 300               | ✓ 301              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 4          | 408        | 708        | 2.103     | 250               | ✓ 250              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 5          | 409        | 709        | 2.542     | 200               | ✓ 199              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 6          | 410        | 715        | 3.271     | 175               | ✓ 175              |               |     | ✓   |     |     |     |     |      |   |  |  |  |  |  |  |
| 7          | 411        | 727        | 3.492     | 150               | ✓ 150              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 8          | 412        | 1105       | 3.627     | 125               | ✓ 125              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 9          | 413        | 1110       | 3.813     | 100               | ✓ 101              |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 10         | 414        | 1126       | 4.573     | 75                | ✓ 74               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 11         | 415        | 1128       | 5.564     | 50                | ✓ 50               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 12         | 416        | 1130       | 6.213     | 30                | ✓ 30               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 13         | 417        | 1134       | 6.744     | 20                | ✓ 20               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 14         | 418        | 1135       | 6.646     | 10                | ✓ 10               |               |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 15         | 419        | 1138       | 6.651     | 5                 | ✓ 5                | ✓             |     |     |     |     |     |     | ✓    | ✓ |  |  |  |  |  |  |
| 16         | 420        | 1142       | 6.675     | 0                 | ✓ 0                |               |     | ✓   |     |     |     |     |      |   |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |   |  |  |  |  |  |  |

Comments: OXYGEN BLUE BOX, NUTRIENTS YELLOW RACK

SHIP: TULLY

ENTERED BY: M.R.

CHECKED BY: M.V.

Bottom Depth: 498

Cast # down: 84

Cast # up:

TimeLOCUTC

Begin: 7371437

Bottom: 7451445

End: 8081509

START POSITION (GPS)

LAT: 51 11.49

LONG: 130 00 04

BOTTOM POSITION (GPS)

LAT: 51 11.98

LONG: 129 59 99

END POSITION (GPS)

LAT: 51 12.01

LONG: 130 0.016



# ROSETTE LOG

MISSION ID: 2005-12

STATION: SS3

CAST NUMBER: 86

UTC DATE (dd/mm/yyyy): 16/06/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |  |  |
| 1          | 422        | 1136       | 1.580     | Bot-20            | ✓ 282              | ✓             | ✓   | ✓   |     |     |     |     |  |  |  |  |  |  |  |
| 2          | 423        | 1137       | 1.610     | 250               | ✓ 250              | ✓             |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 3          | 424        | 1385       | 1.815     | 200               | ✓ 200              |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 4          | 425        | 1386       | 1.991     | 175               | ✓ 175              |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 5          | 426        | 1389       | 2.091     | 150               | ✓ 151              |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 6          | 427        | 1391       | 2.514     | 125               | ✓ 125              |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 7          | 428        | 1393       | 3.604     | 100               | ✓ 100              |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 8          | 429        | 1394       | 4.540     | 75                | ✓ 75               |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 9          | 430        | 1397       | 5.574     | 50                | ✓ 50               |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 10         | 431        | 1398       | 5.790     | 30                | ✓ 30               |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 11         | 432        | 1399       | 5.994     | 20                | ✓ 20               |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 12         | 433        | 1400       | 6.827     | 10                | ✓ 10               |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 13         | 434        | 1402       | 7.000     | 5                 | ✓ 5                | ✓             |     |     |     |     |     | ✓   |  |  |  |  |  |  |  |
| 14         | 435        | 1403       | 6.992     | 0                 | ✓ 0                |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |  |

SHIP: John P. Miley

ENTERED BY: MR

CHECKED BY: MD

Bottom Depth:

Cast # down: 86

Cast # up:

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 1125 | 1825 |
| Bottom: | 1132 | 1832 |
| End:    | 1149 | 1849 |

START POSITION (GPS)

LAT: 51 14 791

LONG: 129 21 229

BOTTOM POSITION (GPS)

LAT: 51 14 778

LONG: 129 21 229

END POSITION (GPS)

LAT: 51 14 704

LONG: 129 21 017

Comments: OXYGEN: RED BOX, NUTRIENTS: WHITE RACK

ROSETTE LOG

CAST FOR LINDSAY + UBC

MISSION ID: 2005-12

STATION: 554

CAST NUMBER: 87

UTC DATE (dd/mm/yyyy):

16/06/05

| MISSION ID: 2005-12 |            |            |           | STATION: 3500     |                    | Samples taken |     |     |  |     |  |     |  |      |   |      |   |  |  |
|---------------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|------|---|------|---|--|--|
| Niskin No.          | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | SAL           |     | NUT |  | TCO |  | CI3 |  | DMSP |   | B-9  |   |  |  |
|                     |            |            |           | Sample Depth      | Confirmed pressure |               | OXY |     |  | ALK |  | CHL |  | PO4  |   | PH-9 |   |  |  |
| 1                   | 436        |            |           | 50                | ✓ 50               |               |     | ✓   |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 2                   | 437        |            |           | 30                | ✓ 31               |               |     |     |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 3                   | 438        |            |           | 20                | ✓ 20               |               |     |     |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 4                   | 439        |            |           | 10                | ✓ 10               |               |     |     |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 5                   | 440        |            |           | 5                 | ✓ 5                | ✓             |     |     |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 6                   | 441        |            |           | 0                 | ✓ 1                |               |     |     |  |     |  |     |  | ✓    | ✓ | ✓    | ✓ |  |  |
| 7                   |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 8                   |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 9                   |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 10                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 11                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 12                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 13                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 14                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 15                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 16                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 17                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 18                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 19                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 20                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 21                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 22                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 23                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |
| 24                  |            |            |           |                   |                    |               |     |     |  |     |  |     |  |      |   |      |   |  |  |

SHIP: TULLY  
ENTERED BY:  
CHECKED BY: DT

Bottom Depth: 240

Cast # down: 87  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2029 |
| Bottom: |     | 2034 |
| End:    |     | 2043 |

START POSITION (GPS)  
LAT: 51 26 99  
LONG: 129 00 07

BOTTOM POSITION (GPS)  
LAT: 51 26 09  
LONG: 129 00 10

END POSITION (GPS)  
LAT: 51 21 04  
LONG: 129 00 13

Comments: NUTRIENTS: LABELLED

ROSETTE LOG

MISSION ID: 2005-12 STATION: 555 CAST NUMBER: 88 UTC DATE (dd/mm/yyyy): 16/06/05

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |  |
| 1          | 442        | 1188       | 1.718     | Bot-20            | ✓ 190              | ✓             | ✓   | ✓   |     |     |     |     |  |  |  |  |  |  |
| 2          | 443        | 1256       | 1.835     | 175               | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  |  |
| 3          | 444        | 1267       | 1.919     | 150               | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 4          | 445        | 1268       | 3.320     | 125               | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 5          | 446        | 1272       | 4.432     | 100               | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 6          | 447        | 1273       | 5.573     | 75                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 7          | 448        | 1274       | 5.770     | 50                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 8          | 449        | 1276       | 5.769     | 30                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 9          | 450        | 1278       | 6.589     | 20                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 10         | 451        | 1300       | 6.486     | 10                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 11         | 452        | 1301       | 6.456     | 5                 | ✓                  | ✓             | ✓   | ✓   |     |     | ✓   |     |  |  |  |  |  |  |
| 12         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |

Comments: OXYGEN: GREEN BOX; NUTRIENTS: LABELLED.

SHIP: COLLET  
ENTERED BY:  
CHECKED BY:

Bottom Depth: 200

Cast # down: 88  
Cast # up:

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 1558 | 2258 |
| Bottom: | 1602 | 2302 |
| End:    | 1617 | 2317 |

START POSITION (GPS)  
LAT: 51 27.98  
LONG: 128 70.03

BOTTOM POSITION (GPS)  
LAT: 51 28.000  
LONG: 128 30.000

END POSITION (GPS)  
LAT: 51 28.063  
LONG: 128 29 942



ROSETTE LOG

MISSION ID: 2005-12 STATION: 557 CAST NUMBER: 90 UTC DATE (dd/mm/yyyy): 17 06 2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |  |
| 1          | 454        | 1327       | 2.916     | Bot-10            | 124                | ✓             | ✓   | ✓   |     |     |     |     |  |  |  |  |  |  |
| 2          | 455        | 1329       | 3.476     | 100               | ✓                  | ✓             |     |     |     |     |     |     |  |  |  |  |  |  |
| 3          | 456        | 1417       | 4.096     | 75                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 4          | 457        | 1421       | 4.556     | 50                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 5          | 458        | 1435       | 4.782     | 30                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 6          | 459        | 1438       | 4.966     | 20                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 7          | 460        | 1439       | 5.756     | 10                | ✓                  |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 8          | 461        | 1440       | 7.679     | 5                 | ✓                  | ✓             | ✓   | ✓   |     |     |     | ✓   |  |  |  |  |  |  |
| 9          |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 10         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 11         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 12         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |

SHIP: JAIN P TULLY  
ENTERED BY: MR  
CHECKED BY:

Bottom Depth: 125

Cast # down: 90  
Cast # up:

|         |      |      |
|---------|------|------|
| Time    | LOC  | UTC  |
| Begin:  | 2017 | 0317 |
| Bottom: | 2020 | 0320 |
| End:    | 2029 | 0329 |

START POSITION (GPS)  
LAT: 51 24 76.9  
LONG: 129 47 606

BOTTOM POSITION (GPS)  
LAT: 51 24 739  
LONG: 127 47 580

END POSITION (GPS)  
LAT: 51 24 661  
LONG: 127 47 566

Comments: OXYGEN: BLACK BOX NUTRIENTS: LABELLED

ROSETTE LOG

MISSION ID: 2005-12 STATION: R4 CAST NUMBER: 92 UTC DATE (dd/mm/yyyy): 17/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|---|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | CI3 | CHL |  |  |  |  |  |   |
| 1          | 463        | 364        | 1.927     | Bot-10            | ✓                  | 291           | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |   |
| 2          | 464        | 572        | 1.817     | 275               | ✓                  | 275           | ✓   |     |     |     |     |     |  |  |  |  |  |   |
| 3          | 465        | 657        | 2.698     | 200               | ✓                  | 200           |     |     |     |     |     |     |  |  |  |  |  |   |
| 4          | 466        | 708        | 2.937     | 175               | ✓                  | 175           |     |     |     |     |     |     |  |  |  |  |  |   |
| 5          | 467        | 709        | 2.919     | 150               | ✓                  | 150           |     |     |     |     |     |     |  |  |  |  |  |   |
| 6          | 468        | 715        | 2.885     | 125               | ✓                  | 125           |     |     |     |     |     |     |  |  |  |  |  |   |
| 7          | 469        | 727        | 5.232     | 100               | ✓                  | 100           |     |     |     |     |     |     |  |  |  |  |  | ? |
| 8          | 470        | 1105       | 3.313     | 75                | ✓                  | 75            |     |     |     |     |     |     |  |  |  |  |  |   |
| 9          | 471        | 1110       | 4.738     | 50                | ✓                  | 50            |     |     |     |     |     |     |  |  |  |  |  |   |
| 10         | 472        | 1126       | 5.205     | 30                | ✓                  | 30            |     |     |     |     |     |     |  |  |  |  |  |   |
| 11         | 473        | 1128       | 5.256     | 20                | ✓                  | 20            |     |     |     |     |     |     |  |  |  |  |  |   |
| 12         | 474        | 1130       | 6.250     | 10                | ✓                  | 10            |     |     |     |     |     |     |  |  |  |  |  |   |
| 13         | 475        | 1134       | 6.911     | 5                 | ✓                  | 5             | ✓   | ✓   | ✓   |     |     | ✓   |  |  |  |  |  |   |
| 14         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |   |

Comments: OXYGEN BLUE BOX NUTRIENTS LABELLED

SHIP: JOHN P TULLY  
ENTERED BY: ME MY  
CHECKED BY:

Bottom Depth: 301

Cast # down: 92  
Cast # up: 92

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 0004 | 0704 |
| Bottom: | 0009 | 0709 |
| End:    | 0022 | 0722 |

START POSITION (GPS)  
LAT: 51 38.890  
LONG: 127 26.756

BOTTOM POSITION (GPS)  
LAT: 51 38.885  
LONG: 127 26.803

END POSITION (GPS)  
LAT: 51 38.867  
LONG: 127 26.844

# ROSETTE LOG

MISSION ID: 2005-12

STATION: R1

CAST NUMBER: 95

UTC DATE (dd/mm/yyyy): 17/6/2005

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           | OXY | NUT | TCO | ALK | C13 | CHL |  |  |  |  |  |  |
| 1          | 478        | 1136       | 1.951     | Bot-10            | ✓                  | 320           | ✓   | 1   | 1   |     |     |     |  |  |  |  |  |  |
| 2          | 479        | 1137       | 1.909     | 300               | ✓                  | 300           | ✓   | 1   | 1   |     |     |     |  |  |  |  |  |  |
| 3          | 480        | 1385       | 2.541     | 250               | ✓                  | 253           | ✓   | 1   | 1   |     |     |     |  |  |  |  |  |  |
| 4          | 481        | 1386       | 3.088     | 200               | ✓                  | 200           |     |     |     |     |     |     |  |  |  |  |  |  |
| 5          | 482        | 1389       | 3.160     | 175               | ✓                  | 175           |     |     |     |     |     |     |  |  |  |  |  |  |
| 6          | 483        | 1391       | 3.207     | 150               | ✓                  | 150           |     |     |     |     |     |     |  |  |  |  |  |  |
| 7          | 484        | 1393       | 3.209     | 125               | ✓                  | 125           |     |     |     |     |     |     |  |  |  |  |  |  |
| 8          | 485        | 1394       | 3.475     | 100               | ✓                  | 100           |     |     |     |     |     |     |  |  |  |  |  |  |
| 9          | 486        | 1397       | 3.985     | 75                | ✓                  | 75            |     |     |     |     |     |     |  |  |  |  |  |  |
| 10         | 487        | 1398       | 4.606     | 50                | ✓                  | 50            |     |     |     |     |     |     |  |  |  |  |  |  |
| 11         | 488        | 1399       | 4.987     | 30                | ✓                  | 30            |     |     |     |     |     |     |  |  |  |  |  |  |
| 12         | 489        | 1400       | 5.033     | 20                | ✓                  | 20            |     |     |     |     |     |     |  |  |  |  |  |  |
| 13         | 490        | 1402       | 5.403     | 10                | ✓                  | 10            |     |     |     |     |     |     |  |  |  |  |  |  |
| 14         | 491        | 1403       | 5.552     | 5                 | ✓                  | 5             | ✓   | ✓   | ✓   |     |     |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |

Comments: OXYGEN: RED BOX

NUTRIENTS: LABELLED

SHIP: JOHN P TULLY

ENTERED BY: MR

CHECKED BY:

Bottom Depth: 329

Cast # down: 95

Cast # up:

Time LOC UTC

Begin: 0250 0950

Bottom: 0255 0955

End:

START POSITION (GPS)

LAT: 51 26.571

LONG: 127 38.248

BOTTOM POSITION (GPS)

LAT: 51 26.308

LONG: 127 38.335

END POSITION (GPS)

LAT:

LONG: