

ROSETTE LOG

MISSION ID: 2003-07 STATION: 59 CAST NUMBER: 1 UTC DATE (dd/mm/yyyy): 24/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |   |     |  |     |  |     |   |  |  |                     |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|---|-----|--|-----|--|-----|---|--|--|---------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |   | TCO |  | C13 |  | Toc |   |  |  |                     |
|            |            |            |           |                   |                    |               | OXY |     |   | ALK |  | CHL |  | DOC |   |  |  |                     |
| 1          | 1          | 1271       | 6.073     | bottom            | ✓                  | 225           | ✓   | ✓   | ✓ |     |  |     |  | ✓   | ✓ |  |  | O <sub>2</sub> high |
| 2          | 2          | 1206       | 5.516     | 200               | ✓                  | 201           |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 3          | 3          | 1216       | 5.527     | 175               | ✓                  | 175           |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 4          | 4          | 1212       | 5.658     | 150               | ✓                  | 150           |     | ✓   | ✓ |     |  |     |  | ✓   | ✓ |  |  |                     |
| 5          | 5          | 1223       | 5.768     | 125               | ✓                  | 126           |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 6          | 6          | 1270       | 5.739     | 100               | ✓                  | 100           |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 7          | 7          | 1224       | 5.888     | 75                | ✓                  |               |     | ✓   | ✓ |     |  |     |  | ✓   | ✓ |  |  |                     |
| 8          | 8          | 1225       | 6.084     | 50                | ✓                  |               |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 9          | 9          | 1228       | 6.064     | 40                | ✓                  |               |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 10         | 10         | 1231       | 6.055     | 30                | ✓                  |               |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 11         | 11         | 1233       | 6.037     | 20                | ✓                  |               |     | ✓   | ✓ |     |  |     |  | ✓   | ✓ |  |  |                     |
| 12         | 12         | 1235       | 6.044     | 10                | ✓                  |               |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 13         | 13         | 1237       | 6.058     | 5                 | ✓                  |               |     | ✓   | ✓ |     |  |     |  |     |   |  |  |                     |
| 14         | 14         | 1241       | 6.050     | 0                 | ✓                  |               |     | ✓   | ✓ |     |  |     |  | ✓   | ✓ |  |  |                     |
| 15         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 16         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 17         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 18         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 19         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 20         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 21         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 22         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 23         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |
| 24         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |     |   |  |  |                     |

Comments:

SHIP: Vector  
ENTERED BY:  
CHECKED BY:

Bottom Depth: 234

Cast # down: 001  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0105 |
| Bottom: |     | 0112 |
| End:    |     | 0124 |

START POSITION (GPS)  
LAT: 48°37.80  
LONG: 123°14.58

BOTTOM POSITION (GPS)  
LAT: 48°37.81  
LONG: 123°14.58

END POSITION (GPS)  
LAT: 48°37.84  
LONG: 123°14.71

Oxy kit #1.

ROSETTE LOG

MISSION ID: 2003-07 STATION: 102 CAST NUMBER: 4 UTC DATE (dd/mm/yyyy): 24/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 15         | 1247       | 2.101     | bottom            | ✓ 249              | X             | X   | ✓   |  |     |  |     |  |  |  |  |  |  |
| 2          | 16         | 1248       | 2.124     | 250               | ✓ 248              | X             | X   | ✓   |  |     |  |     |  |  |  |  |  |  |
| 3          | 17         | 1256       | 2.516     | 200               | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 4          | 18         | 1260       | 2.984     | 175               | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 5          | 19         | 1258       | 3.167     | 150               | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 6          | 20         | 1268       | 3.201     | 125               | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 7          | 21         | 1267       | 3.400     | 100               | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 8          | 22         | 1272       | 3.984     | 75                | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 9          | 23         | 1273       | 4.853     | 50                | ✓ 51               |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 10         | 24         | 1274       | 5.096     | 40                | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 11         | 25         | 1276       | 5.367     | 30                | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 12         | 26         | 1277       | 5.688     | 20                | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 13         | 27         | 1278       | 5.793     | 10                | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 14         | 28         |            | 6.430     | 5                 | ✓                  |               | X   |     |  |     |  |     |  |  |  |  |  |  |
| 15         | 29         |            | 6.869     | 0                 | ✓                  |               | X   | ✓   |  |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |

Comments:

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 260

Cast # down: 4

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1305 |
| Bottom: |     | 1310 |
| End:    |     | 1324 |

START POSITION (GPS)

LAT: 48°30.02

LONG: 124°44.08

BOTTOM POSITION (GPS)

LAT: 48°30.02

LONG: 124°44.11

END POSITION (GPS)

LAT: 48°30.06

LONG: 124°44.22

ROSETTE LOG

MISSION ID: 2003-07 STATION: 75 CAST NUMBER: 7 UTC DATE (dd/mm/yyyy): 24/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |     |     |   |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|-----|-----|---|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |     |     |   |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL | Toc | Doc |   |  |  |  |
| 1          | 30         | 534        | 2.326     | bottom            | 220                | X             | X   | X   |  |     |  |     |     | ✓   | ✓ |  |  |  |
| 2          | 31         | 535        | 2.275     | 200               | 200                |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 3          | 32         | 364        | 2.436     | 175               | 175                |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 4          | 33         | 572        | 2.768     | 150               | 150                |               |     |     |  |     |  |     |     | ✓   | ✓ |  |  |  |
| 5          | 34         | 657        | 3.124     | 125               | 125                |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 6          | 35         |            | 3.554     | 100               | 100                |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 7          | 36         |            | 4.083     | 75                | 75                 |               |     |     |  |     |  |     |     | ✓   | ✓ |  |  |  |
| 8          | 37         | 709        | 4.883     | 50                | 50                 |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 9          | 38         | 715        | 5.006     | 40                | 41                 |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 10         | 39         |            | 5.342     | 30                | 30                 |               |     |     |  |     |  |     |     | ✓   | ✓ |  |  |  |
| 11         | 40         | 1105       | 5.537     | 20                | 21                 |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 12         | 41         | 1110       | 5.756     | 10                | 10                 |               |     | ✓   |  |     |  |     |     |     |   |  |  |  |
| 13         | 42         | 1126       | 6.678     | 5                 | 5                  |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 14         | 43         | 1128       | 6.751     | 0                 | 1.6                |               |     |     |  |     |  |     |     | ✓   | ✓ |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |   |  |  |  |

Comments:

SHIP:

ENTERED BY:

CHECKED BY:

Bottom Depth: 226

Cast # down: 7

Cast # up:

Time

LOC

UTC

Begin: 0857 1557

Bottom:

End:

START POSITION (GPS)

LAT: 48°28.148'

LONG: 124°32.850'

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 72 CAST NUMBER: 10 UTC DATE (dd/mm/yyyy): 24/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |     |     |  |  |  |                                    |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|-----|-----|--|--|--|------------------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |     |     |  |  |  |                                    |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL | Toc | Doc |  |  |  |                                    |
| 1          | 44         | 1130       | 2.333     | bottom            | 181                | ✓             | ✓   | ✓   |  |     |  |     |     |     |  |  |  | negative extra acid<br>O2 too high |
| 2          | 45         |            | 2.991     | 175               | 175                | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 3          | 46         |            | 2.280     | 150               | 150                | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 4          | 47         |            | 2.666     | 125               | 125                | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 5          | 48         |            | 3.310     | 100               | 100                | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 6          | 49         | 1138       | 3.853     | 75                | 75                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 7          | 50         |            | 4.755     | 50                | 50                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 8          | 51         |            | 4.992     | 40                | 40                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 9          | 52         | 1153       | 5.105     | 30                | 29                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 10         | 53         | 1158       | 5.451     | 20                | 20                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 11         | 54         | 1175       | 5.686     | 10                | 10                 | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 12         | 55         | 1176       | 5.706     | 5                 | 5                  | ✓             |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 13         | 56         | 1188       | 5.742     | surface           | 2                  | ✓             | ✓   | ✓   |  |     |  |     |     |     |  |  |  |                                    |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |     |  |  |  |                                    |

Comments:

SHIP: VECTOR  
ENTERED BY: J. Edge  
CHECKED BY:

Bottom Depth: 190m

Cast # down:  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2041 |
| Bottom: |     | 2044 |
| End:    |     | 2057 |

START POSITION (GPS)  
LAT: 48° 18.61 N  
LONG: 124° 04.05 W

BOTTOM POSITION (GPS)  
LAT:  
LONG:

END POSITION (GPS)  
LAT: 48° 18.60 N  
LONG: 124° 04.38 W

ROSETTE LOG

MISSION ID: 2003-07 STATION: 69 CAST NUMBER: 13 UTC DATE (dd/mm/yyyy): 24/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |   |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|---|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |   | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    | OXY           |   |     |   | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 57         | 1317       | 2.449     | 175               | ✓ 171              | ✓             | ✓ | ✓   |   |     |  |     |  |  |  |  |  |  |
| 2          | 58         | 1318       | 2.513     | 150               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 3          | 59         | 1319       | 2.643     | 125               | ✓ 127              |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 4          | 60         | 1320       | 3.793     | 100               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 5          | 61         | 1321       | 4.627     | 75                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 6          | 62         | 1322       | 5.068     | 50                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 7          | 63         | 1323       | 5.281     | 40                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 8          | 64         | 1324       | 5.447     | 30                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 9          | 65         | 1325       | 5.464     | 20                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 10         | 66         | 1326       | 5.493     | 10                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 11         | 67         | 1327       | 5.474     | 5                 | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 12         | 68         | 1328       | 5.489     | surface           | ✓                  |               |   | ✓   | ✓ |     |  |     |  |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |

SHIP: VECTOR

ENTERED BY: J Page / S.T.

CHECKED BY:

Bottom Depth: 176

Cast # down: 13

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2331 |
| Bottom: |     | 2335 |
| End:    |     | 23   |

START POSITION (GPS)

LAT: 48°15.57

LONG: 123°43.27

BOTTOM POSITION (GPS)

LAT: 48°15.54

LONG: 123°43.39

END POSITION (GPS)

LAT: 48°15.59

LONG: 123°43.50

Comments:

ROSETTE LOG

MISSION ID: 2003-07 STATION: ADCP CAST NUMBER: 17 UTC DATE (dd/mm/yyyy): 25/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 69         | 1317       | 3896      | bottom            | 110                |               | X   | XX  |  |     |  |     |  |  |  |  |  |  |
| 2          | 70         | 1318       | 4.190     | 100               | 100.5              |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 3          | 71         | 1319       | 4.928     | 75                | 76                 |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 4          | 72         | 1320       | 5.315     | 50                | 50                 |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 5          | 73         | 1321       | 5.463     | 40                | 40                 |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 6          | 74         | 1322       | 5.485     | 30                | 30                 |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 7          | 75         | 1323       | 5.654     | 20                | 19                 |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 8          | 76         | 1324       | 5.802     | 10                | 9.5                |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 9          | 77         | 1325       | 5.920     | 5                 | 5.5                |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 10         | 78         | 1326       | 5.980     | 0                 | 1.7                |               | ↓   | ↓   |  |     |  |     |  |  |  |  |  |  |
| 11         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 12         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |  |

Comments:

SHIP: Vector

ENTERED BY:

CHECKED BY:

Bottom Depth: 119

Cast # down: 17

Cast # up:

TimeLOCUTC

Begin: 19:5102:51

Bottom:

End:

START POSITION (GPS)

LAT: 48°13.990

LONG: 123°18.050

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 65 CAST NUMBER: 22 UTC DATE (dd/mm/yyyy): 25/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |  |     |  |     |  |     |     |     |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|--|-----|--|-----|--|-----|-----|-----|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |  | NUT |  | TCO |  | C13 |     |     |  |  |  |  |
|            |            |            |           |                   |                    | OXY           |  |     |  | ALK |  | CHL | Toc | Dox |  |  |  |  |
| 1          | 79         | 1327       | 3.969     | bottom            | 113                |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 2          | 80         | 1328       | 4.598     | 100               | 100                |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 3          | 81         | 1329       | 4.937     | 75                | 76                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 4          | 82         | 1331       | 5.281     | 50                | 51                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 5          | 83         | 1332       | 5.315     | 40                | 40                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 6          | 84         | 1333       | 5.471     | 30                | 30                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 7          | 85         | 1334       | 5.576     | 20                | 20                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 8          | 86         | 1335       | 5.734     | 10                | 10                 |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 9          | 87         | 1336       | 5.764     | 5                 | 5                  |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 10         | 88         | 1337       | 5.888     | 0                 | 1.4                |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 11         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 12         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 13         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 14         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 15         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 16         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 17         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 18         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 19         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 20         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 21         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 22         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 23         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |
| 24         |            |            |           |                   |                    |               |  |     |  |     |  |     |     |     |  |  |  |  |

Comments:

SHIP: CCGS Vector  
ENTERED BY: SP  
CHECKED BY:

Bottom Depth: 125

Cast # down: 22  
Cast # up:

|         |     |      |
|---------|-----|------|
| Time    | LOC | UTC  |
| Begin:  |     | 0539 |
| Bottom: |     | 0541 |
| End:    |     | 0550 |

START POSITION (GPS)  
LAT: 48 15.909  
LONG: 123 09.763

BOTTOM POSITION (GPS)  
LAT: 48 15.912  
LONG: 123 09.717

END POSITION (GPS)  
LAT:  
LONG:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 62 CAST NUMBER: 25 UTC DATE (dd/mm/yyyy): 25-APR-2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |  |     |     |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|--|-----|-----|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |  | NUT |     | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    | OXY           |  |     | Toc | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 89         | 364        | 4.528     | bottom            | ✓ 141              |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 2          | 90         | 534        | 4.627     | 125               | ✓ 125              |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 3          | 91         | 535        | 5.144     | 100               | ✓ 100              |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 4          | 92         | 572        | 5.296     | 75                | ✓ 75               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 5          | 93         | 657        | 5.383     | 50                | ✓ 50               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 6          | 94         | 707        | 5.456     | 40                | ✓ 40               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 7          | 95         | 708        | 5.593     | 30                | ✓ 30               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 8          | 96         | 709        | 5.685     | 20                | ✓ 20               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 9          | 97         | 715        | 5.769     | 10                | ✓ 10               |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 10         | 98         | 727        | 5.788     | 5                 | ✓ 5                |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 11         | 99         | 1105       | 5.867     | surface           | ✓ 1                |               |  |     | ✓   |     |  |     |  |  |  |  |  |  |
| 12         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |  |     |     |     |  |     |  |  |  |  |  |  |

Comments: sample no. 99 had a copepod in sample

SHIP: VECTOR

ENTERED BY: JSP

CHECKED BY:

Bottom Depth: 151

Cast # down:

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0809 |
| Bottom: |     |      |
| End:    |     | 0822 |

START POSITION (GPS)

LAT: 48° 22.82 N

LONG: 123° 02.56 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT: 48° 22.97 N

LONG: 123° 02.45 W

ROSETTE LOG

MISSION ID: 2003-07 STATION: 56 CAST NUMBER: 31 UTC DATE (dd/mm/yyyy): 25/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |  |  |  |  |  |             |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|--|--|--|--|-------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |  |  |  |  |  |             |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL |  |  |  |  |  |             |
| 1          | 100        | 535        | 5.378     | bottom            | 196                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 2          | 101        | 364        | 5.275     | 200               | 196                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 3          | 102        | 572        | 5.323     | 175               | 175                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 4          | 103        | 657        | 6.706     | 150               | 150                |               |     |     |  |     |  |     |  |  |  |  |  | O2 too high |
| 5          | 104        | 709        | 5.398     | 125               | 125                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 6          | 105        | 715        | 5.379     | 100               | 100                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 7          | 106        | 707        | 5.349     | 75                | 75                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 8          | 107        | 110.5      | 5.493     | 50                | 51                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 9          | 108        | 727        | 5.621     | 40                | 41                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 10         | 109        | 708        | 5.685     | 30                | 30                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 11         | 110        | 1110       | 5.705     | 20                | 20                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 12         | 111        | 1126       | 5.761     | 10                | 10                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 13         | 112        | 1128       | 5.821     | 5                 | 5                  |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 14         | 113        | 1130       | 5.869     | surface           | 1.5                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |

SHIP: VECTOR

ENTERED BY:

CHECKED BY:

Bottom Depth: 207

Cast # down:

Cast # up:

|         |     |       |
|---------|-----|-------|
| Time    | LOC | UTC   |
| Begin:  |     | 16:25 |
| Bottom: |     | 16:30 |
| End:    |     |       |

START POSITION (GPS)

LAT: 48 46.55

LONG: 123 01.42

BOTTOM POSITION (GPS)

LAT: 48 46.58

LONG: 123 01.36

END POSITION (GPS)

LAT:

LONG:

Comments:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 46 CAST NUMBER: 40 UTC DATE (dd/mm/yyyy): 25+26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |  |  |  |  |  |                     |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|--|--|--|--|---------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |  |  |  |  |  |                     |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL |  |  |  |  |  |                     |
| 1          | 114        | 1134       | 4.246     | Bottom            | ✓ 170              | ✓             | ✓   | ✓   |  |     |  |     |  |  |  |  |  | may have hit bottom |
| 2          | 115        | 1135       | 4.896     | 150               | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  | (or very close)     |
| 3          | 116        | 1136       | 5.361     | 125               | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 4          | 117        | 1137       | 5.564     | 100               | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 5          | 118        | 1138       | 5.703     | 75                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 6          | 119        | 1142       | 5.792     | 50                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 7          | 120        | 1146       | 5.800     | 40                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 8          | 121        | 1153       | 5.884     | 30                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 9          | 122        | 1158       | 5.991     | 20                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 10         | 123        | 1175       | 6.240     | 10                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 11         | 124        | 1176       | 7.003     | 5                 | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                     |
| 12         | 125        | 1188       | 7.909     | surface           | ✓                  | ✓             | ✓   | ✓   |  |     |  |     |  |  |  |  |  |                     |
| 13         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                     |

Comments:

SHIP: VECTOR

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 180

Cast # down: 40

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2353 |
| Bottom: |     | 2355 |
| End:    |     | 0006 |

START POSITION (GPS)

LAT: 48° 51.38

LONG: 123° 10.73

BOTTOM POSITION (GPS)

LAT: 48° 51.38

LONG: 123° 10.73

END POSITION (GPS)

LAT: 48° 51.35

LONG: 123° 10.65

ROSETTE LOG

MISSION ID: 2003-07 STATION: 42 CAST NUMBER: 42 UTC DATE (dd/mm/yyyy): 26/04/2003

|            |            |            |           | ROSETTE OPERATION |                    | Samples taken |   |     |  |     |  |     |  |  |  |  |  |  |                         |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|--|-----|--|-----|--|--|--|--|--|--|-------------------------|
| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | Sample Depth      | Confirmed pressure | SAL           |   | NUT |  | TCO |  | C13 |  |  |  |  |  |  |                         |
|            |            |            |           |                   |                    | OXY           |   |     |  | ALK |  | CHL |  |  |  |  |  |  |                         |
| 1          | 126        | 1317       | 2.580     | bottom            | 308                | X             | X | XX  |  |     |  |     |  |  |  |  |  |  |                         |
| → 2        | 127        | 1318       | 3.258     | 300               | 301                | X             |   |     |  |     |  |     |  |  |  |  |  |  | O <sub>2</sub> too high |
| 3          | 128        | 1319       | 2.825     | 250               | 250                | X             |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 4          | 129        | 1320       | 3.294     | 200               | 200                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 5          | 130        | 1321       | 3.773     | 175               | 174                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 6          | 131        | 1322       | 4.462     | 150               | 150                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 7          | 132        | 1323       | 4.921     | 125               | 125                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 8          | 133        | 1324       | 5.073     | 100               | 100                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 9          | 134        | 1325       | 5.127     | 75                | 75                 |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 10         | 135        | 1326       | 5.095     | 50                | 50                 |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 11         | 136        | 1327       | 5.107     | 40                | 39.4               |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 12         | 137        | 1328       | 5.573     | 30                | 30                 |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 13         | 138        | 1336       | 6.007     | 20                | 20                 |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 14         | 139        | 1331       | 6.347     | 10                | 10                 |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 15         | 140        | 1332       | 6.897     | 5                 | 5                  |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 16         | 141        | 1333       | 8.339     | 0                 | 1.3                |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 17         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 18         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 19         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 20         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 21         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 22         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 23         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |
| 24         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |                         |

Comments:

SHIP: Vector

ENTERED BY:

CHECKED BY:

Bottom Depth: 326

Cast # down:

Cast # up:

TimeLOCUTC

Begin:0239

Bottom:

End:

START POSITION (GPS)

LAT:48 01.69

LONG:123 26.28

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

# ROSETTE LOG

MISSION ID: 2003-07 STATION: 39 CAST NUMBER: 46 UTC DATE (dd/mm/yyyy): 26/04/2003

[illegible]

|              |
|--------------|
| SHIP: VECTOR |
| ENTERED BY:  |
| CHECKED BY:  |

Bottom Depth: 377

|              |
|--------------|
| Cast # down: |
| Cast # up:   |

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0643 |
| Bottom: |     | 0649 |
| End:    |     | 0707 |

|                      |
|----------------------|
| START POSITION (GPS) |
| LAT: 49°09.779       |
| LONG: 123°33.014     |

|                       |             |
|-----------------------|-------------|
| BOTTOM POSITION (GPS) |             |
| LAT:                  | 49° 09.807  |
| LONG:                 | 123° 33.032 |

|                    |             |
|--------------------|-------------|
| END POSITION (GPS) |             |
| LAT:               | 49° 09.703  |
| LONG:              | 123° 33.163 |

**Comments:**

ROSETTE LOG

MISSION ID: 2003-07 STATION: 27 CAST NUMBER: 49 UTC DATE (dd/mm/yyyy): 26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |    |   |  |                      |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|----|---|--|----------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |    | ✓ |  |                      |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL | DO |   |  |                      |
| 1          | 159        | 1284       | 2.543     | bottom            | ✓ 340              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  | copepod in O2 sample |
| 2          | 160        | 1287       | 2.630     | 300               | ✓ 300              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 3          | 161        | 1288       | 2.814     | 250               | ✓ 250              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 4          | 162        | 1290       | 3.517     | 200               | ✓ 200              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 5          | 163        | 1291       | 3.841     | 175               | ✓ 175              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 6          | 164        | 1293       | 4.250     | 150               | ✓ 150              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 7          | 165        | 1294       | 4.598     | 125               | ✓ 125              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 8          | 166        | 1295       | 4.651     | 100               | ✓ 100              |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 9          | 167        | 1297       | 4.681     | 75                | ✓ 75               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 10         | 168        | 1298       | 4.773     | 50                | ✓ 50               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 11         | 169        | 1299       | 4.893     | 40                | ✓ 40               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 12         | 170        | 1300       | 5.124     | 30                | ✓ 30               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 13         | 171        | 1301       | 5.711     | 20                | ✓ 20               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 14         | 172        | 1302       | 7.237     | 10                | ✓ 10               |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 15         | 173        | 1303       | 8.157     | 5                 | ✓ 5                |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 16         | 174        | 1304       | 8.178     | 0                 | ✓ 1                |               | ✓   | ✓   |  |     |  |     | ✓  |   |  |                      |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |    |   |  |                      |

Comments: air vents on niskins were open on recovery.

SHIP: VECTOR  
ENTERED BY: JSP  
CHECKED BY:

Bottom Depth:

Cast # down: 49  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1009 |
| Bottom: |     |      |
| End:    |     | 1030 |

START POSITION (GPS)  
LAT: 49°19.100 N  
LONG: 123°48.045 W

BOTTOM POSITION (GPS)  
LAT:  
LONG:

END POSITION (GPS)  
LAT: 49°19.135 N  
LONG: 123°48.465 W

ROSETTE LOG

MISSION ID: 2003-07 STATION: 2 CAST NUMBER: 53 UTC DATE (dd/mm/yyyy): 26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |   |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|---|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |   | TCO |  | C13 |  |  |  |  |  |  |
| 1          | 176        | 1279       | 2.753     | bottom            | ✓ 271              | X             | X | XX  |   |     |  |     |  |  |  |  |  |  |
| 2          | 177        |            | 2692      | 250               | ✓                  | X             |   |     |   |     |  |     |  |  |  |  |  |  |
| 3          | 178        |            | 3.718     | 200               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 4          | 179        |            | 3.783     | 175               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 5          | 180        |            | 4.234     | 150               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 6          | 181        |            | 4.587     | 125               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 7          | 182        |            | 4.755     | 100               | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 8          | 183        |            | 4838      | 75                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 9          | 184        | 1293       | 4848      | 50                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 10         | 185        |            | 4995      | 40                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 11         | 186        | 1295       | 5.572     | 30                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 12         | 187        | 1297       | 5.953     | 20                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 13         | 188        | 1298       | 6.592     | 10                | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 14         | 189        | 1300       | 7.306     | 5                 | ✓                  |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 15         | 190        | 1299       | 7.456     | 0                 | ✓                  |               |   | ✓   | ✓ |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |   |     |   |     |  |     |  |  |  |  |  |  |

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 289

Cast # down: 53

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1428 |
| Bottom: |     | 1433 |
| End:    |     | 1446 |

START POSITION (GPS)

LAT: 49° 24.10

LONG: 124° 09.30

BOTTOM POSITION (GPS)

LAT: 49° 24.07

LONG: 124° 09.37

END POSITION (GPS)

LAT: 49° 24.04

LONG: 124° 09.49

ROSETTE LOG

MISSION ID: 2003-07 STATION: 3 CAST NUMBER: 56 UTC DATE (dd/mm/yyyy): 26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |     |     |     |     |     |  |  |                         |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|-----|-----|-----|-----|-----|--|--|-------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |     | C13 |     |     |     |  |  |                         |
|            |            |            |           |                   |                    |               | OXY |     |  |     | ALK |     | CHL | Toc | Doc |  |  |                         |
| 1          | 191        | 1301       | 2.578     | bottom            | 318                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 2          | 192        | 1302       | 2.622     | 300               | 300                |               |     |     |  |     |     |     |     |     |     |  |  | ! Missed filling bottle |
| 3          | 193        | 1303       | 3.349     | 250               | 200                |               |     |     |  |     |     |     |     |     |     |  |  | @ 250m => Filled        |
| 4          | 194        | 1304       | 3.343     | 200               | 200                |               |     |     |  |     |     |     |     |     |     |  |  | 2 @ 200m instead        |
| 5          | 195        | 1305       | 3.702     | 175               | 175                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 6          | 196        | 1306       | 3.932     | 150               | 150                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 7          | 197        | 1307       | 4.517     | 125               | 125                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 8          | 198        | 1309       | 4.587     | 100               | 100                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 9          | 199        | 1310       | 4.189     | 75                | 75                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 10         | 200        | 1311       | 4.975     | 50                | 50                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 11         | 201        | 1313       | 5.241     | 40                | 40                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 12         | 202        | 1314       | 5.545     | 30                | 30                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 13         | 203        | 1315       | 6.051     | 20                | 20                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 14         | 204        | 1316       | 6.909     | 10                | 10                 |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 15         | 205        | 1317       | 7.662     | 5                 | 5                  |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 16         | 206        | 1318       | 7.858     | 0                 | 1.5                |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |     |     |  |  |                         |

Comments:

SHIP:

ENTERED BY:

CHECKED BY:

Bottom Depth: 330

Cast # down:

Cast # up:

| Time    | LOC | UTC   |
|---------|-----|-------|
| Begin:  |     | 16:57 |
| Bottom: |     |       |
| End:    |     |       |

START POSITION (GPS)

LAT: 49 26.58

LONG: 124 20.21

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

# ROSETTE LOG

MISSION ID: 2003-07

STATION: 6

CAST NUMBER: 58

UTC DATE (dd/mm/yyyy):

26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |  |     |  |     |  |   |  |  |  |                |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|--|-----|--|-----|--|---|--|--|--|----------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |  | TCO |  | C13 |  |   |  |  |  |                |
| 1          | 207        | 1319       | 3.891     | bottom            | ✓ 185              |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 2          | 208        | 1320       | 3.918     | 175               | ✓ 175              |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 3          | 209        | 1321       | 4.360     | 150               | ✓ 150              |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 4          | 210        | 1322       | 4.545     | 125               | ✓ 125              |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 5          | 211        | 1323       | 4.560     | 100               | ✓ 100              |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 6          | 212        | 1324       | 4.355     | 75                | ✓ 75               |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 7          | 213        | 1325       | 4.809     | 50                | ✓ 50               |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 8          | 214        | 1326       | 4.940     | 40                | ✓ 40               |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 9          | 215        | 1327       | 5.342     | 30                | ✓ 30               |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 10         | 216        | 1328       | 5.910     | 20                | ✓                  |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 11         | 217        | 1329       | 7.844     | 10                | ✓                  |               | ✓ | /   |  |     |  |     |  | / |  |  |  | spigot leaking |
| 12         | 218        | 1331       | 8.605     | 5                 | ✓                  |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 13         | 219        | 1332       | 8.774     | surface           | ✓ 1                |               | ✓ | /   |  |     |  |     |  | / |  |  |  |                |
| 14         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 15         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 16         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 17         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 18         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 19         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 20         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 21         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 22         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 23         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |
| 24         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |   |  |  |  |                |

SHIP: VECTOR

ENTERED BY: JSP

CHECKED BY:

Bottom Depth: 195

Cast # down:

Cast # up:

| Time    | LOC | UTC         |
|---------|-----|-------------|
| Begin:  |     | <u>1848</u> |
| Bottom: |     | <u>1853</u> |
| End:    |     | <u>1903</u> |

START POSITION (GPS)

LAT: 49° 30.625N

LONG: 124° 27.825W

BOTTOM POSITION (GPS)

LAT: 49° 30.604N

LONG: 124° 27.797W

END POSITION (GPS)

LAT: 49° 30.573N

LONG: 124° 27.717W

Comments:

changed pinger

ROSETTE LOG

MISSION ID: 2003-07 STATION: 9 CAST NUMBER: 61 UTC DATE (dd/mm/yyyy): 26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |   |     |  |     |     |   |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|---|-----|--|-----|-----|---|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |   | TCO |  | C13 |     |   |  |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |   | ALK |  | CHL | Tox |   |  |  |  |  |
| 1          | 220        | 1333       | 3.389     | bottom            | ✓                  | 160           | ✓   | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 2          | 221        | 1334       | 3.476     | 150               | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 3          | 222        | 1335       | 3.656     | 125               | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 4          | 223        | 1336       | 3.867     | 100               | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 5          | 224        | 1337       | 4.455     | 75                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 6          | 225        | 1338       | 5.113     | 50                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 7          | 226        | 1340       | 5.578     | 40                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 8          | 227        | 1341       | 6.017     | 30                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 9          | 228        | 1342       | 6.801     | 20                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 10         | 229        | 1344       | 8.732     | 10                | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 11         | 230        | 1345       | 9.320     | 5                 | ✓                  |               |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 12         | 231        | 1346       | 9.396     | surface           | ✓                  | 1             |     | ✓   | ✓ |     |  |     |     | ✓ |  |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |   |     |  |     |     |   |  |  |  |  |

Comments:

SHIP: VECTOR

ENTERED BY: JSP

CHECKED BY:

Bottom Depth: 173 (sonar)

Cast # down:

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2120 |
| Bottom: |     |      |
| End:    |     |      |

START POSITION (GPS)

LAT: 49°35.496 N

LONG: 124°38.334 W

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 12 CAST NUMBER: 64 UTC DATE (dd/mm/yyyy): 26/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |    |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|----|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |    | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    | OXY           |   |     |    | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 232        | 535        | 2.653     | bottom            | ✓                  | 354           | X | X   | XX |     |  |     |  |  |  |  |  |  |
| 2          | 233        | 364        | 2.943     | 300               | ✓                  |               | X |     |    |     |  |     |  |  |  |  |  |  |
| 3          | 234        | 572        | 3.290     | 250               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 4          | 235        | 657        | 3.578     | 200               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 5          | 236        | 707        | 3.823     | 175               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 6          | 237        | 708        | 4.037     | 150               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 7          | 238        | 709        | 4.279     | 125               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 8          | 239        | 715        | 4.336     | 100               | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 9          | 240        | 727        | 4.325     | 75                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 10         | 241        | 1105       | 5.067     | 50                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 11         | 242        | 1110       | 5.240     | 40                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 12         | 243        | 1126       | 5.602     | 30                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 13         | 244        | 1128       | 6.955     | 20                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 14         | 245        | 1130       | 8.045     | 10                | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 15         | 246        | 1134       | 8.397     | 5                 | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 16         | 247        | 1135       | 8.902     | 0                 | ✓                  |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |   |     |    |     |  |     |  |  |  |  |  |  |

Comments:

SHIP: Vector

ENTERED BY: ST.

CHECKED BY:

Bottom Depth: 360

Cast # down: 64

Cast # up:

|         |     |      |
|---------|-----|------|
| Time    | LOC | UTC  |
| Begin:  |     | 2320 |
| Bottom: |     | 2326 |
| End:    |     | 2343 |

START POSITION (GPS)

LAT: 49° 43.60

LONG: 124° 40.76

BOTTOM POSITION (GPS)

LAT: 49° 43.61

LONG: 124° 40.78

END POSITION (GPS)

LAT: 49° 43.64

LONG: 124° 40.95

\*Should be labelled cast 66

# ROSETTE LOG

MISSION ID: 2003-07

STATION: 14

CAST NUMBER: 65\*

UTC DATE (dd/mm/yyyy):

27/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |  |     |  |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|--|-----|--|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |  | NUT |  | TCO |  | C13 |  |  |  |  |  |  |
|            |            |            |           |                   |                    | OXY           |  |     |  | ALK |  | CHL |  |  |  |  |  |  |
| 1          | 248        | 1318       | 2.919     | bottom            | ✓ 310              | X             |  | XX  |  |     |  |     |  |  |  |  |  |  |
| 2          | 249        | 1319       | 3.055     | 250               | ✓                  | X             |  |     |  |     |  |     |  |  |  |  |  |  |
| 3          | 250        | 1320       | 3.538     | 200               | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 4          | 251        | 1321       | 3.678     | 175               | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 5          | 252        | 1322       | 3.831     | 150               | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 6          | 253        | 1323       | 3.815     | 125               | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 7          | 254        | 1324       | 3.836     | 100               | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 8          | 255        | 1325       | 4.454     | 75                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 9          | 256        | 1326       | 4.899     | 50                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 10         | 257        | 1327       | 5.245     | 40                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 11         | 258        | 1328       | 5.784     | 30                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 12         | 259        | 1329       | 6.721     | 20                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 13         | 260        | 1331       | 7.612     | 10                | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 14         | 261        | 1332       | 7.871     | 5                 | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 15         | 262        | 1333       | 7.915     | 0                 | ✓                  |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |  |

SHIP: VECTOR  
ENTERED BY: ST  
CHECKED BY:

Bottom Depth: 318

Cast # down: 65

Cast # up:

Time LOC UTC  
Begin: 0143  
Bottom: 0149  
End:

START POSITION (GPS)  
LAT: 49°53.01  
LONG: 124°59.59

BOTTOM POSITION (GPS)  
LAT: 49°53.03  
LONG: 124°59.59

END POSITION (GPS)  
LAT: 49°53.  
LONG: 124°59.

Comments:

ROSETTE LOG

MISSION ID: 2003-07 STATION: 16 CAST NUMBER: 69 UTC DATE (dd/mm/yyyy): 27/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |  |  |  |  |  |             |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|--|--|--|--|--|-------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |  |  |  |  |  |             |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL |  |  |  |  |  |             |
| 1          | 263        | 1334       | 3.497     | bottom            | 150                |               | X   | XX  |  |     |  |     |  |  |  |  |  |             |
| 2          | 264        | 1335       | 3.757     | 125               | 125                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 3          | 265        | 1344       | 3.924     | 100               | 100                |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 4          | 266        | 1336       | 4.062     | 75                | 75                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 5          | 267        | 1337       | 5.232     | 50                | 50                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 6          | 268        | 1338       | 5.529     | 40                | 41                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 7          | 269        | 1340       | 5.795     | 30                | 30                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 8          | 270        | 1341       | 5.971     | 20                | 20                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 9          | 271        | 1342       | 6.259     | 10                | 10                 |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 10         | 272        | 1345       | 6.743     | 5                 | 5                  |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 11         | 273        | 1346       | —         | 0                 | 2                  |               |     |     |  |     |  |     |  |  |  |  |  | flask empty |
| 12         | 274        | 1347       | 6.859     |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 13         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |             |

Comments:

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 158

Cast # down: 68

Cast # up:

|         |      |     |
|---------|------|-----|
| Time    | LOC  | UTC |
| Begin:  | 0448 |     |
| Bottom: | 0453 |     |
| End:    |      |     |

START POSITION (GPS)

LAT: 49°57.698

LONG: 125°08.792'

BOTTOM POSITION (GPS)

LAT: 49°57.713

LONG: 125°08.788

END POSITION (GPS)

LAT: 49°57.642'

LONG: 125°08.792'

# ROSETTE LOG

MISSION ID: 2003-07

STATION: 39-2

CAST NUMBER: 76

UTC DATE (dd/mm/yyyy):

1/04/2003

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |  |     |  |     |  |  |  |  |  |                   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|--|-----|--|-----|--|--|--|--|--|-------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |  | TCO |  | C13 |  |  |  |  |  |                   |
| 1          | 274        | 534        | 2.403     | bottom            | 375                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 2          | 275        | 364        | 2.441     | 350               | 350                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 3          | 276        | 512        | 2.607     | 300               | 300                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 4          | 277        | 657        | 2.831     | 250               | 250                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 5          | 278        | 708        | 3.343     | 200               | 200                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 6          | 279        | 707        | 3.852     | 175               | 175                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | Dosimet error     |
| 7          | 280        | 715        | 4.458     | 150               | 150                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | - went over 101%. |
| 8          | 281        | 709        | 4.883     | 125               | 125                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | + renamed it for  |
| 9          | 282        | 727        | 5.122     | 100               | 100                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | some reason-      |
| 10         | 283        | 1105       | 5.150     | 75                | 75                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | said it already   |
| 11         | 284        | 1110       | 5.119     | 50                | 50                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | existed           |
| 12         | 285        | 1126       | 5.109     | 40                | 40                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 13         | 286        | 1128       | 5.318     | 30                | 30                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 14         | 287        | 1130       | 5.515     | 20                | 20                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  |                   |
| 15         | 288        | 1134       | 6.918     | 10                | 10                 |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | 2.98% - I think   |
| 16         | 289        | 1135       | 7.848     | 5                 | 5                  |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | the last few      |
| 17         | 290        | 1136       | 8.283     | 0                 | 1.4                |               | ✓ | ✓   |  |     |  |     |  |  |  |  |  | samples are       |
| 18         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  | warming up +      |
| 19         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  | depressing a bit. |
| 20         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |                   |
| 21         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |                   |
| 22         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |                   |
| 23         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |                   |
| 24         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |                   |

Comments:

SHIP: VECTOR

ENTERED BY: 8

CHECKED BY:

Bottom Depth: 280

Cast # down: 76

Cast # up:

Time LOC UTC

Begin: 1522

Bottom:

End:

START POSITION (GPS)

LAT: 49° 09.777

LONG: 123° 32.970

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG: