

ROSETTE LOG

MISSION ID: 2004-08 STATION: SI CAST NUMBER: 1 UTC DATE (dd/mm/yyyy): 27/04/04

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |     |      |  |  |      |                                          |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|-----|------|--|--|------|------------------------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |     |      |  |  |      |                                          |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL | NH4 | CDOM |  |  | HP4C |                                          |
| 1          | 1          | 1366       | 0         | 105               | 173                | ✓             | ✓   |     |  |     |  |     |     |      |  |  |      | sulfur smell                             |
| 2          | 2          | 727        | 0         | 125               | 173                | ✓             | ✓   |     |  |     |  |     |     |      |  |  |      | sulfur smell (ST.)                       |
| 3          | 3          | 1349       | 0         | 150               | 50                 | ✓             | ✓   |     |  |     |  |     |     |      |  |  |      | 11                                       |
| 4          | 4          | 1223       | 0.050     | 125               | 125                | ✓             | ✓   |     |  |     |  |     |     |      |  |  |      | (mixed up #5 with note to flask self)    |
| 5          | 5          | 1216       | 0.957     | 100               | 100                | ✓             | ✓   |     |  |     |  |     |     |      |  |  |      |                                          |
| 6          | 6          | 1224       | 4.248     | 75                | 75                 | ✓             | ✓   |     |  |     |  |     | ✓   |      |  |  |      | #5 flask # was 1223                      |
| 7          | 7          | 1225       | 5.038     | 50                | 50                 | ✓             | ✓   |     |  |     |  |     | ✓   |      |  |  |      |                                          |
| 8          | 8          |            |           | 35                | 35                 | ✓             | ✓   |     |  |     |  |     | ✓   | ✓    |  |  |      |                                          |
| 9          | 9          | 1320       | 5.701     | 25                | 25                 | ✓             | ✓   |     |  |     |  |     | ✓   | ✓    |  |  |      | (note to self-check entries in computer) |
| 10         | 10         |            |           | 15                | 15                 | ✓             | ✓   |     |  |     |  |     | ✓   | ✓    |  |  | ✓    |                                          |
| 11         | 11         | 1368       | 5.939     | 10                | 10                 | ✓             | ✓   |     |  |     |  |     | ✓   | ✓    |  |  | ✓    |                                          |
| 12         | 12         | 1360       | 6.051     | 5                 | 5                  | ✓             | ✓   |     |  |     |  |     | ✓   | ✓    |  |  | ✓    |                                          |
| 13         | 13         | 1369       | 6.285     | 0                 | ✓ 66               | ✓             | ✓   | ✓   |  |     |  |     | ✓   | ✓    |  |  | ✓    |                                          |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |     |      |  |  |      |                                          |

Comments:

SHIP: Vector  
ENTERED BY: LP  
CHECKED BY: LP

Bottom Depth: 175

Cast # down: /  
Cast # up: /

| Time    | LOC   | UTC |
|---------|-------|-----|
| Begin:  | 02 08 |     |
| Bottom: | 02 13 |     |
| End:    | 02 27 |     |

START POSITION (GPS)  
LAT: 48 39 46  
LONG: 123 30 025

BOTTOM POSITION (GPS)  
LAT: 48 39 42  
LONG: 123 30 012

END POSITION (GPS)  
LAT: 48 39 33  
LONG: 123 129 97

ROSETTE LOG

MISSION ID: 2004-08 STATION: 59 CAST NUMBER: 27 UTC DATE (dd/mm/yyyy): 27/04/2004

| 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          | 14         | 1371       | 4.889     | Bot-5             | ✓ 228              | X             | X   | XX  |   |     |  |     |  |  |  |  |  |                    |
| 2          | 15         | 1373       | 4.959     | 200               | ✓                  | X             |     | 1   |   |     |  |     |  |  |  |  |  |                    |
| 3          | 16         | 1376       | 5.083     | 175               | ✓ 176              |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 4          | 17         | 1374       | 5.128     | 150               | ✓ 152              |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 5          | 18         | 1365       | 5.275     | 125               | ✓                  |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 6          | 19         | 1379       | 5.529     | 100               | ✓                  |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 7          | 20         | 1380       | 5.680     | 75                | ✓                  |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 8          | 21         | 1381       | 5.778     | 50                | ✓                  |               |     |     |   |     |  |     |  |  |  |  |  | colourimeter error |
| 9          | 22         |            |           | 35                | ✓                  |               |     |     |   |     |  | ✓   |  |  |  |  |  |                    |
| 10         | 23         | 1382       | 6.088     | 25                | ✓                  |               |     |     |   |     |  | ✓   |  |  |  |  |  |                    |
| 11         | 24         |            |           | 15                | ✓                  |               |     |     |   |     |  | ✓   |  |  |  |  |  |                    |
| 12         | 25         | 1383       | 6.089     | 10                | ✓                  |               |     |     |   |     |  | ✓   |  |  |  |  |  |                    |
| 13         | 26         | 1384       | 6.084     | 5                 | ✓                  |               |     |     |   |     |  | ✓   |  |  |  |  |  |                    |
| 14         | 27         | 1385       | 6.082     | 0                 | ✓                  |               |     | ✓   | ✓ |     |  | ✓   |  |  |  |  |  |                    |
| 15         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 16         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 17         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 18         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 19         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 20         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 21         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 22         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 23         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |
| 24         |            |            |           |                   |                    |               |     |     |   |     |  |     |  |  |  |  |  |                    |

Comments:

SHIP: Vector  
ENTERED BY: ST  
CHECKED BY:

Bottom Depth: 235

Cast # down: 2  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0434 |
| Bottom: |     | 0441 |
| End:    |     | 0456 |

START POSITION (GPS)  
LAT: 48°37'82"  
LONG: 123°14'61"

BOTTOM POSITION (GPS)  
LAT: 48°37'85"  
LONG: 123°14'67"

END POSITION (GPS)  
LAT: 48°37'38.01"  
LONG: 123°14'79"

ROSETTE LOG

MISSION ID: 2004-08 STATION: 75 CAST NUMBER: 7 UTC DATE (dd/mm/yyyy): 27/04/2004

| 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          | 28         | 1403       | 2.244     | 6-810             | ✓                  | 210           | x   | x   | xx |     |  |     |  |  |  |  |  |               |
| 2          | 29         | 1404       | 2.987     | 100               | ✓                  | 102           |     | x   |    |     |  |     |  |  |  |  |  |               |
| 3          | 30         | 1406       | 4.659     | 50                | ✓                  |               |     | x   |    |     |  |     |  |  |  |  |  |               |
| 4          | 31         | 1407       | 5.631     | 35                | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 5          | 32         | 1410       | 6.905     | 25                | ✓                  |               |     | x   |    |     |  | xx  |  |  |  |  |  |               |
| 6          | 33         | 1411       | 6.953     | 15                | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 7          |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  | Niskin broken |
| 8          | 34         | 1424       | 6.954     | 10                | ✓                  |               |     | x   |    |     |  |     |  |  |  |  |  |               |
| 9          | 35         | 1423       | 6.948     | 5                 | ✓                  |               |     | x   |    |     |  |     |  |  |  |  |  |               |
| 10         | 36         | 1422       | 6.942     | 0                 | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 11         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 12         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 13         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 14         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 15         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 16         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 17         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 18         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 19         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 20         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 21         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 22         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 23         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |
| 24         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |               |

Comments: \* cut down on some depths because I may be sampling alone. (ST)

SHIP: Vector  
ENTERED BY: ST  
CHECKED BY:

Bottom Depth: 219

Cast # down: 7  
Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1723 |
| Bottom: |     | 1735 |
| End:    |     |      |

START POSITION (GPS)  
LAT: 48°28.28  
LONG: 124°32.82

BOTTOM POSITION (GPS)  
LAT: 48°28.47  
LONG: 124°32.96

END POSITION (GPS)  
LAT:  
LONG:

ROSETTE LOG

MISSION ID: 2004-08 STATION: 69 CAST NUMBER: 10 UTC DATE (dd/mm/yyyy): 28/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |    |     |     |     |     |   |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|----|-----|-----|-----|-----|---|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |    | TCO |     | C13 |     |   |  |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |    | ALK | chl | CHL | chl |   |  |  |  |  |
| 1          | 37         | 1421       | 2.265     | Bot-5             | ✓                  | 171.3         |     | X   | XX |     |     |     |     |   |  |  |  |  |
| 2          | 38         | 1417       | 2.259     | 150               | ✓                  | 15            |     |     |    |     |     |     |     |   |  |  |  |  |
| 3          | 39         | 1414       | 2.430     | 125               | ✓                  |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 4          | 40         | 1206       | 3.479     | 100               | ✓                  |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 5          | 41         | 1195       | 4.493     | 75                | ✓                  |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 6          | 42         | 1142       | 4.771     | 50                | ✓                  |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 7          |            |            |           | TRIP!             | ✓                  |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 8          | 43         |            |           | 35                | ✓                  |               |     |     |    |     |     | ✓   |     |   |  |  |  |  |
| 9          | 44         | 1175       | 5.206     | 25                | ✓                  |               |     | X   |    |     |     | ✓   |     | X |  |  |  |  |
| 10         | 45         |            |           | 15                | ✓                  |               |     |     |    |     |     | ✓   |     |   |  |  |  |  |
| 11         | 46         | 1153       | 5.665     | 10                | ✓                  |               |     | X   |    |     |     | ✓   |     |   |  |  |  |  |
| 12         | 47         | 1138       | 5.762     | 5                 | ✓                  |               |     |     |    |     |     | ✓   |     |   |  |  |  |  |
| 13         | 48         | 1158       | 5.763     | 0                 | ✓                  |               |     |     |    |     |     | ✓   |     |   |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |    |     |     |     |     |   |  |  |  |  |

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 179

Cast # down: 10

Cast # up:

|         |     |      |
|---------|-----|------|
| Time    | LOC | UTC  |
| Begin:  |     | 0346 |
| Bottom: |     | 0351 |
| End:    |     |      |

START POSITION (GPS)

LAT: 48°15'49"

LONG: 123°43'05"

BOTTOM POSITION (GPS)

LAT: 48°15'43"

LONG: 123°43'02"

END POSITION (GPS)

LAT: 48°15'

LONG: 123°43'

Comments:



ROSETTE LOG

MISSION ID: 2004-08 STATION: ADCP CAST NUMBER: 0015 UTC DATE (dd/mm/yyyy): 28/04/04

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |  |     |   |     |  |     |     |     |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|--|-----|---|-----|--|-----|-----|-----|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |  | NUT |   | TCO |  | CI3 | ALK | CHL |  |  |  |  |
| 1          | 49         | 1146       | 2.837     | Bot-5             | ✓ 117.5            |               |  | ✓   | ✓ |     |  |     |     |     |  |  |  |  |
| 2          | 50         | 1430       | 3.388     | 100               | ✓ 100.56           |               |  | ✓   | ✓ |     |  |     |     |     |  |  |  |  |
| 3          | 51         | 1425       | 4.604     | 75                | ✓                  |               |  | ✓   | ✓ |     |  |     |     |     |  |  |  |  |
| 4          | 52         | 1426       | 5.063     | 50                | ✓                  |               |  | ✓   | ✓ |     |  |     |     |     |  |  |  |  |
| 5          | 53         | 1427       | 5.328     | 35                | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 6          | 54         | 428        | 5.587     | 25                | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 7          |            |            |           |                   |                    |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 8          | 55         | 1429       | 5.699     | 15                | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 9          | 56         | 1431       | 5.736     | 10                | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 10         | 57         | 1384       | 5.822     | 5                 | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 11         | 58         | 1212       | 5.811     | 0                 | ✓                  |               |  | ✓   | ✓ |     |  |     |     | ✓   |  |  |  |  |
| 12         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 13         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 14         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 15         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 16         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 17         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 18         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 19         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 20         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 21         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 22         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 23         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |
| 24         |            |            |           |                   |                    |               |  |     |   |     |  |     |     |     |  |  |  |  |

Comments:

SHIP:  
ENTERED BY: CW  
CHECKED BY:

Bottom Depth: 123

Cast # down: 0015  
Cast # up: 0015

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 0920 |
| Bottom: |     | 0925 |
| End:    |     | 0935 |

START POSITION (GPS)  
LAT: 48 14 012  
LONG: 123 18 076

BOTTOM POSITION (GPS)  
LAT: 48 14 022  
LONG: 123 18 150

END POSITION (GPS)  
LAT: 48 14 161  
LONG: 123 18 372

ROSETTE LOG

MISSION ID: 2004-08 STATION: 65 CAST NUMBER: 18 UTC DATE (dd/mm/yyyy): 28/04/2004

| 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          | 59         | 1366       | 3.481     | 101-5             | ✓ 122              |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 2          | 60         | 727        | 3.905     | 100               | ✓ 99               |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 3          | 61         | 1349       | 4.621     | 75                | ✓ 75               |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 4          | 62         | 1216       | 5.627     | 50                | ✓ 50               |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 5          | 63         | 1222       |           | 35                | ✓ 35               |               |  |     |  |     |  | ✓   |  |  |  |  |  |                                |
| 6          | 64         | 1223       | 5.829     | 25                | ✓ 25               |               |  |     |  |     |  | ✓   |  |  |  |  |  |                                |
| 7          |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 8          | 65         | 1225       |           | 15                | ✓ 15               |               |  |     |  |     |  | ✓   |  |  |  |  |  |                                |
| 9          | 66         | 1224       | 5.834     | 10                | ✓ 10               |               |  |     |  |     |  | ✓   |  |  |  |  |  |                                |
| 10         | 67         | 1225       | 5.289     | 5                 | ✓ 5                |               |  |     |  |     |  | ✓   |  |  |  |  |  | note to self (check sample #5) |
| 11         | 68         | 1320       | 5.854     | 0                 | ✓                  |               |  |     |  |     |  | ✓   |  |  |  |  |  | *color error                   |
| 12         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 13         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 14         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 15         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 16         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 17         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 18         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 19         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 20         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 21         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 22         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 23         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |
| 24         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                                |

Comments:

SHIP: V. 100  
ENTERED BY: [signature]  
CHECKED BY: [signature]

Bottom Depth: 122

Cast # down: 18  
Cast # up: 18

| Time    | LOC | UTC |
|---------|-----|-----|
| Begin:  | 12  | 02  |
| Bottom: | 12  | 05  |
| End:    | 12  | 15  |

START POSITION (GPS)  
LAT: 48 15 942  
LONG: 123 9 901

BOTTOM POSITION (GPS)  
LAT: 48 15 956  
LONG: 123 9 966

END POSITION (GPS)  
LAT: 48 15 931  
LONG: 123 10 056

ROSETTE LOG

MISSION ID: 2004-08 STATION: 62 CAST NUMBER: 19 UTC DATE (dd/mm/yyyy): 28/04/2004

| 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         | 1368       | 3.573     | bot-5             | ✓ 145              |               |     |     |  |     |     |     |     |  |  |          |
| 2          | 70         | 1360       | 4.084     | 125               | ✓ 125              |               |     |     |  |     |     |     |     |  |  |          |
| 3          | 71         | 1369       | 4.769     | 100               | ✓ 100              |               |     |     |  |     |     |     |     |  |  |          |
| 4          | 72         | 1321       | 5.223     | 75                | ✓ 75               |               |     |     |  |     |     |     |     |  |  | reversed |
| 5          | 73         | 1379       | 5.571     | 50                | ✓ 50               |               |     |     |  |     |     |     |     |  |  |          |
| 6          | 74         | —          | 5         | 35                | ✓ 35               | —             | —   |     |  |     |     |     | ✓✓  |  |  |          |
| 7          |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 8          | 75         | 1365       | 5.736     | 25                | ✓ 25               |               |     |     |  |     |     |     | ✓✓  |  |  |          |
| 9          | 76         |            |           | 15                | ✓ 15               | —             | —   |     |  |     |     |     | ✓✓  |  |  |          |
| 10         | 77         | 1374       | 5.946     | 10                | ✓ 10               |               |     |     |  |     |     |     | ✓✓  |  |  |          |
| 11         | 78         | 1376       | 5.972     | 5                 | ✓ 5                |               |     |     |  |     |     |     | ✓✓  |  |  |          |
| 12         | 79         | 1373       | 6.075     | 0                 | ✓ 1.19             |               |     |     |  |     |     |     | ✓✓  |  |  |          |
| 13         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 14         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 15         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 16         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |          |

Comments:

SHIP: Vector

ENTERED BY: 70

CHECKED BY: 70

Bottom Depth: 146

Cast # down: 19

Cast # up: 19

|         |     |     |
|---------|-----|-----|
| Time    | LOC | UTC |
| Begin:  | 13  | 18  |
| Bottom: | 13  | 22  |
| End:    | 13  | 33  |

START POSITION (GPS)

LAT: 48 22 837

LONG: 123 5 621

BOTTOM POSITION (GPS)

LAT: 48 22 858

LONG: 123 2 656

END POSITION (GPS)

LAT: 48 22 944

LONG: 123 2 608

ROSETTE LOG

MISSION ID: 2004-08 STATION: 54 CAST NUMBER: 2) UTC DATE (dd/mm/yyyy): 28/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |  |     |      |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|--|-----|------|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |  | C13 |      |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK |  | CHL | CDOM |  |  |  |
| 1          | 80         |            |           | 25                | ✓                  |               |     |     |  |     |  | ✓✓  |      |  |  |  |
| 2          | 81         |            |           | 25                | ✓                  |               |     |     |  |     |  | ✓✓  | ✓✓   |  |  |  |
| 3          | 82         |            |           | 15                | ✓                  |               |     |     |  |     |  | ✓✓  | ✓✓   |  |  |  |
| 4          | 83         |            |           | 10                | ✓                  |               |     |     |  |     |  | ✓✓  | ✓✓   |  |  |  |
| 5          | 84         |            |           | 5                 | ✓                  |               |     |     |  |     |  | ✓✓  | ✓✓   |  |  |  |
| 6          | 85         |            |           | 0                 |                    |               |     |     |  |     |  | ✓✓  | ✓✓   |  |  |  |
| 7          |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 8          |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 9          |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 10         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 11         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 12         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |      |  |  |  |



ROSETTE LOG

MISSION ID: 2004-08 STATION: 53 CAST NUMBER: 22 UTC DATE (dd/mm/yyyy): 28/04/2004

| 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          | 86         |            |           | 60                | ✓                  | ✓             |     |     |  |     |  | ✓   |  |  |  |  |  | testing to see that Bot 7 fired - took a few samples (why not) |
| 2          | 87         |            |           | 60                | ✓                  | ✓             |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 3          | 88         |            |           | 60                | ✓                  |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 4          | 89         |            |           | 60                | ✓                  |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 5          | 90         |            |           | 60                | ✓                  |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 6          | 91         |            |           | 60                | ✓                  |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 7          | 92         |            |           | 60                | ✓                  |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 8          |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 9          |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 10         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 11         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 12         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 13         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 14         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 15         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 16         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 17         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 18         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 19         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 20         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 21         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 22         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 23         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |
| 24         |            |            |           |                   |                    |               |     |     |  |     |  |     |  |  |  |  |  |                                                                |

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth:

Cast # down:

Cast # up:

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

START POSITION (GPS)

LAT:

LONG:

BOTTOM POSITION (GPS)

LAT:

LONG:

END POSITION (GPS)

LAT:

LONG:

Comments:

ROSETTE LOG

MISSION ID: 2004-08 STATION: 56 CAST NUMBER: 0025 UTC DATE (dd/mm/yyyy): 28/04/04

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |     |        |         |     |                                       |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|--------|---------|-----|---------------------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |     | TCO |     | C13 |     |     |        |         |     |                                       |
|            |            |            |           |                   |                    |               | OXY |     | NH4 |     | ALK |     | CHL | CO2 | H4SiO4 | Phyts-F | chl |                                       |
| 1          | 93         | 1380       | 5.054     | BOT - 5           | ✓ 210.2            |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 2          | 94         | 1381       | 5.113     | 175               | ✓ 174.88           |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 3          | 95         | 1382       | 5.132     | 150               | ✓                  |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 4          | 96         | 1383       | 5.193     | 125               | ✓                  |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 5          | 97         | 1381       | 5.579     | 100               | ✓                  |               |     |     |     |     |     |     |     |     |        |         |     | * changed probes!                     |
| 6          | 98         | 1385       | 5.195     | 75                | ✓                  |               |     |     |     | ✓✓  |     |     |     |     |        |         |     |                                       |
| 7          | 99         | 1337       | 5.459     | 50                | ✓                  |               |     |     |     | ✓✓  |     |     |     |     |        |         |     |                                       |
| 8          | 100        | 1386       | 5.840     | 35                | ✓                  |               |     |     |     | ✓✓  |     | ✓✓  |     |     |        |         |     |                                       |
| 9          | 101        | 1461       | 6.014     | 25                | ✓                  |               |     |     |     | ✓✓  |     | ✓✓  | ✓✓  |     |        |         |     |                                       |
| 10         | 102        |            |           | 15                | ✓                  |               |     |     |     | ✓✓  |     | ✓✓  | ✓✓  |     |        |         |     |                                       |
| 11         | 103        |            |           | 15                | ✓                  |               |     |     |     |     |     |     |     | ✓✓  | ✓✓     | ✓✓      | ✓✓  | Lugol's sample - added Lugol's Apr 29 |
| 12         | 104        | 1461       | 6.251     | 10                | ✓                  |               |     |     |     | ✓✓  |     | ✓✓  | ✓✓  |     |        |         |     |                                       |
| 13         | 105        | 1402       | 6.327     | 5                 | ✓                  |               |     |     |     | ✓✓  |     | ✓✓  | ✓✓  |     |        |         |     |                                       |
| 14         | 106        |            |           | 5                 | ✓                  |               |     |     |     |     |     |     |     | ✓✓  | ✓✓     | ✓✓      |     | Lugol's sample fixed Apr 29           |
| 15         | 107        | 1335       | 6.471     | 0                 | ✓                  |               |     | ✓✓  |     |     |     | ✓✓  | ✓✓  |     |        |         |     |                                       |
| 16         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 17         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |        |         |     |                                       |

SHIP: VECTOR  
ENTERED BY: CW  
CHECKED BY:

Bottom Depth: 217

Cast # down: 0025  
Cast # up: 0025

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2208 |
| Bottom: |     | 2213 |
| End:    |     | 2227 |

START POSITION (GPS)  
LAT: 48 46 384  
LONG: 123 1 567

BOTTOM POSITION (GPS)  
LAT: 48 46 392  
LONG: 123 1 524

END POSITION (GPS)  
LAT: 48 46 294  
LONG: 123 1 513

Comments: I am still getting the colourimeter "numeric explosion" at least once a day. If the problem is the probe, I should see no more problems. SI.

ROSETTE LOG

MISSION ID: 2004-04 STATION: 48 CAST NUMBER: 29 UTC DATE (dd/mm/yyyy): 29/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |     |     |     |      |      |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|-----|-----|-----|------|------|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |     | C13 |     |      |      |  |  |  |
|            |            |            |           |                   |                    |               | OXY |     |  |     | ALK |     | CHL | CDOM | HPIC |  |  |  |
| 1          | 108        |            |           | 35                | ✓ 36               |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 2          | 109        |            |           | 25                | ✓                  |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 3          | 110        |            |           | 15                | ✓                  |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 4          | 111        |            |           | 10                | ✓                  |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 5          | 112        |            |           | 5                 | ✓                  |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 6          | 113        |            |           | 0                 | ✓                  |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 7          |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 8          |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 9          |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 10         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 11         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 12         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |      |      |  |  |  |

ROSETTE LOG

MISSION ID: 2004-08 STATION: 46 CAST NUMBER: 0034 UTC DATE (dd/mm/yyyy): 29/04/04

| 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        | 1403       | 5.206     | 80-5              | ✓ 173              | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  |                      |
| 2          | 115        | 1404       | 5.130     | 150               | ✓ 149.8            | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  |                      |
| 3          | 116        | 1406       | 5.270     | 125               | ✓                  | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  |                      |
| 4          | 117        | 1407       | 5.442     | 100               | ✓                  | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  |                      |
| 5          | 118        | 1410       | 5.484     | 75                | ✓                  | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  |                      |
| 6          | 119        | 1411       | 4.995 *   | 50                | ✓                  | ✓             |  | ✓   |  |     |  |     |  |  |  |  |  | ? no obvious problem |
| 7          | 120        | 1424       | 5.486     | 35                | ✓                  | ✓             |  | ✓   |  |     |  | ✓   |  |  |  |  |  | with filtration      |
| 8          | 121        | 1423       | 6.522     | 25                | ✓                  | ✓             |  | ✓   |  |     |  | ✓   |  |  |  |  |  | (from wrong bottle?) |
| 9          | 122        | 1422       |           | 15                | ✓                  |               |  | ✓   |  |     |  | ✓   |  |  |  |  |  | no                   |
| 10         | 123        | 1422       | 7.531     | 10                | ✓                  | ✓             |  | ✓   |  |     |  | ✓   |  |  |  |  |  |                      |
| 11         | 124        |            |           | 5                 | ✓                  |               |  | ✓   |  |     |  | ✓   |  |  |  |  |  | Wrong sample #?      |
| 12         | 125        | 1421       | 7.476     | 0                 | ✓                  | ✓             |  | ✓   |  |     |  | ✓   |  |  |  |  |  | no oxy sample.       |
| 13         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 14         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 15         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 16         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 17         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 18         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 19         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 20         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 21         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 22         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 23         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |
| 24         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |  |  |                      |

ROSETTE LOG

MISSION ID: 2004-08      STATION: 042      CAST NUMBER: 0036      UTC DATE (dd/mm/yyyy): 29/04/04

| 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          | 126        | 1206            | 2.656     | Bot-5             | ✓ 316.94           | ✓             | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 2          | 127        | 1195            | 2.744     | 300               | ✓ 299.80           | ✓             | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 3          | 128        | 1142            | 3.286     | 250               | ✓ 249.87           |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 4          | 129        | 1175            | 4.550     | 200               | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 5          | 130        | 1153            | 5.012     | 175               | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 6          | 131        | 1138            | 5.266     | 150               | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 7          | 132        | 1158            | 5.085     | 125               | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 8          | 133        | 1146            | 5.188     | 100               | ✓ 100.06           |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 9          | 134        | 1430            | 5.043     | 75                | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 10         | 135        | 1425            | 4.722     | 50                | ✓                  |               | ✓ | ✓   |  |     |  |     |   |  |  |  |  |  |
| 11         | 136        | <del>1426</del> |           | 35                | ✓                  |               | - | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 12         | 137        | 1426            | 6.148     | 25                | ✓                  |               | ✓ | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 13         | 138        |                 |           | 15                | ✓                  |               | - | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 14         | 139        | 1427            | 7.829     | 10                | ✓                  |               | ✓ | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 15         | 140        | 1428            | 7.847     | 5                 | ✓                  |               | ✓ | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 16         | 141        | 1429            | 7.952     | 0                 | ✓ 7.54             |               | ✓ | ✓   |  |     |  | ✓   | ✓ |  |  |  |  |  |
| 17         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 18         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 19         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 20         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 21         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 22         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 23         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |
| 24         |            |                 |           |                   |                    |               |   |     |  |     |  |     |   |  |  |  |  |  |

Comments:

SHIP: VECTOR

ENTERED BY: CW

CHECKED BY:

Bottom Depth: 325

Cast # down: 0036

Cast # up: 0036

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1015 |
| Bottom: |     | 1022 |
| End:    |     | 1041 |

START POSITION (GPS)

LAT: 49 1 789

LONG: 123 26 243

BOTTOM POSITION (GPS)

LAT: 49 1 756

LONG: 123 26 245

END POSITION (GPS)

LAT: 49 1 736

LONG: 123 26 198



ROSETTE LOG

MISSION ID: 2004-08 STATION: 39 CAST NUMBER: 41 UTC DATE (dd/mm/yyyy): 29/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |     |      |       |      |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|------|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |     | TCO |     | C13 |     |     |      |       |      |  |
|            |            |            |           |                   |                    |               | OXY |     | NH4 |     | ALK |     | CHL | S-F | CDOM | Phyco | HPLC |  |
| 1          | 142        | 1337       | 2.148     | 307.5             | ✓                  | 370           | ✓   |     |     |     |     |     |     |     |      |       |      |  |
| 2          | 143        | 1386       | 2.305     | 350               | ✓                  |               | ✓   |     |     |     |     |     |     |     |      |       |      |  |
| 3          | 144        | 1461       | 2.546     | 300               | ✓                  |               | ✓   |     |     |     |     |     |     |     |      |       |      |  |
| 4          | 145        | 1481       | 2.844     | 250               | ✓                  |               | ✓   |     |     |     |     |     |     |     |      |       |      |  |
| 5          | 146        | 1402       | 3.830     | 200               | ✓                  |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 6          | 147        | 1335       | 4.308     | 175               | ✓                  |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 7          | 148        | 1225       | 5.161     | 150               | ✓                  |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 8          | 149        | 1320       | 4.799     | 125               | ✓                  |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 9          | 150        | 1368       | 5.008     | 100               | ✓                  |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 10         | 151        | 1360       | 4.690     | 75                | ✓                  |               |     |     | ✓✓  |     |     |     |     |     |      |       |      |  |
| 11         | 152        | 1369       | 4.847     | 50                | ✓                  |               |     | ✓   | ✓✓  |     |     |     |     |     |      |       |      |  |
| 12         | 153        |            |           | 35                | ✓                  |               |     | -   | ✓✓  |     |     |     | ✓✓  |     |      |       |      |  |
| 13         | 154        | 1379       | 5.547     | 25                | ✓                  |               |     |     | ✓✓  |     |     |     | ✓✓  |     | ✓✓   |       |      |  |
| 14         | 155        |            |           | 15                | ✓                  |               |     | -   | ✓✓  |     |     |     | ✓✓  |     | ✓✓   |       |      |  |
| 15         | 156        |            |           | 15                | ✓                  |               |     | +   |     |     |     |     | ✓✓  | ✓✓  | ✓✓   | ✓✓    | ✓✓   |  |
| 16         | 157        | 1371       | 7.593     | 10                | ✓                  |               |     |     | ✓✓  |     |     |     | ✓✓  |     | ✓✓   |       |      |  |
| 17         | 158        | 1373       | 7.637     | 5                 | ✓                  |               |     | ✓   | ✓✓  |     |     |     | ✓✓  |     | ✓✓   |       |      |  |
| 18         | 159        |            |           | 5                 | ✓                  |               |     | ✓   | ✓✓  |     |     |     | ✓✓  | ✓✓  | ✓✓   | ✓✓    | ✓✓   |  |
| 19         | 160        | 1376       | 7.610     | 0                 |                    |               |     | ✓   | ✓✓  |     |     |     | ✓✓  |     | ✓✓   |       |      |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |      |       |      |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |     |      |       |      |  |

Comments:

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 376

Cast # down: 41

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1458 |
| Bottom: |     | 1507 |
| End:    |     |      |

START POSITION (GPS)

LAT: 49° 09.72

LONG: 123° 32.84

BOTTOM POSITION (GPS)

LAT: 49° 09.65

LONG: 123° 32.81

END POSITION (GPS)

LAT: 49° 09.

LONG: 123° 32.

ROSETTE LOG

MISSION ID: 2004-08      STATION: 27      CAST NUMBER: 44      UTC DATE (dd/mm/yyyy): 30/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |     |        |      |      |                  |                   |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|--------|------|------|------------------|-------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |     | TCO |     | C13 |     |        |      |      |                  |                   |
|            |            |            |           |                   |                    |               | OXY |     | NH4 |     | ALK |     | CHL | S-F on | CDOM | HPLC | ph <sub>td</sub> |                   |
| 1          | 161        | 1365       | 2.353     | BOT-5             | ✓ 340              | ✓             | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 2          | 162        | 1321       | 2.788     | 300               | ✓                  | ✓             | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 3          | 163        | 1380       | 3.686     | 250               | ✓                  | ✓             | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 4          | 164        | 1381       | 4.760     | 200               | ✓                  | ✓             | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 5          | 165        | 1382       | 4.856     | 175               | ✓                  |               | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 6          | 166        | 1383       | 4.870     | 150               | ✓                  |               | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 7          | 167        | 1188       | 4.957     | 125               | ✓                  |               | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 8          | 168        | 1385       | 4.795     | 100               | ✓                  |               | ✓   | ✓   |     |     |     |     |     |        |      |      |                  |                   |
| 9          | 169        | 1366       | 4.772     | 75                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |     |        |      |      |                  |                   |
| 10         | 170        | 727        | 4.270     | 50                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |     |        |      |      |                  |                   |
| 11         | 171        |            |           | 35                | ✓                  |               |     | ✓   | ✓   |     |     |     | ✓   | ✓      |      |      |                  |                   |
| 12         | 172        | 1349       | 5.186     | 25                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     | ✓   | ✓      | ✓    |      |                  | old filter (room) |
| 13         | 173        |            |           | 15                | ✓                  |               |     | ✓   | ✓   |     |     |     |     |        |      |      |                  |                   |
| 14         | 174        |            |           | 15                | ✓                  |               |     |     |     |     |     |     | ✓   | ✓      | ✓    | ✓    | ✓                | new filter (room) |
| 15         | 175        | 1216       | 5.942     | 10                | ✓                  |               | ✓   | ✓   | ✓   |     |     |     | ✓   | ✓      | ✓    |      |                  | ↓                 |
| 16         | 176        | 1223       | 7.570     | 5                 | ✓                  |               | ✓   | ✓   | ✓   |     |     |     |     |        |      |      |                  |                   |
| 17         | 177        |            |           | 5                 | ✓                  |               |     |     |     |     |     |     | ✓   | ✓      | ✓    | ✓    | ✓                |                   |
| 18         | 178        | 1224       | 7.980     | 0                 | ✓                  |               | ✓   | ✓   | ✓   |     |     |     | ✓   | ✓      | ✓    |      |                  |                   |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |     |        |      |      |                  |                   |

Comments:

SHIP: Vector

ENTERED BY: MQ

CHECKED BY:

Bottom Depth: 347

Cast # down: 44

Cast # up:

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1908 |
| Bottom: |     | 1913 |
| End:    |     | 1933 |

START POSITION (GPS)

LAT: 49.19.03

LONG: 123.47.97

BOTTOM POSITION (GPS)

LAT: 49.19.04

LONG: 123.48.00

END POSITION (GPS)

LAT:

LONG:

ROSETTE LOG

MISSION ID: 2004-08 STATION: 02 CAST NUMBER: 47 UTC DATE (dd/mm/yyyy): 27/04/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |     |     |      |      |    |                 |   |                     |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|------|------|----|-----------------|---|---------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |     | TCO |     | C13 |      | SE   |    |                 |   |                     |
|            |            |            |           |                   |                    |               | OXY |     | NH4 | ALK | CHL | Chl | CDOM | HPLC | ph | pH <sub>5</sub> |   |                     |
| 1          | 179        | 1403       | 2.744     | B-10              | ✓                  | 273           | ✓   |     | ✓   |     |     |     |      |      |    |                 |   | - colourimeter went |
| 2          | 180        | 1404       | 2.927     | 250               | ✓                  |               | ✓   |     | ✓   |     |     |     |      |      |    |                 |   | funny again ;. not  |
| 3          | 181        | 1406       | 3.926     | 200               | ✓                  |               | ✓   |     | ✓   |     |     |     |      |      |    |                 |   | the probe. (591.6%) |
| 4          | 182        | 1407       | 3.912     | 175               | ✓                  |               |     |     | ✓   |     |     |     |      |      |    |                 |   |                     |
| 5          | 183        | 1410       | 4.194     | 150               | ✓                  |               |     |     | ✓   |     |     |     |      |      |    |                 |   |                     |
| 6          | 184        | 1411       | 4.628     | 125               | ✓                  |               |     |     | ✓   |     |     |     |      |      |    |                 |   |                     |
| 7          | 185        | 1424       | 4.708     | 100               | ✓                  |               |     |     | ✓   |     |     |     |      |      |    |                 |   |                     |
| 8          | 186        | 1423       | —         | 75                | ✓                  |               |     |     | ✓   | ✓   |     |     |      |      |    |                 |   | flask broken        |
| 9          | 187        | 1422       | 4.520     | 50                | ✓                  |               |     | ✓   | ✓   | ✓   |     |     |      |      |    |                 |   |                     |
| 10         | 188        | 1421       |           | 35                | ✓                  |               |     |     | ✓   | ✓   |     | ✓   |      |      |    |                 |   |                     |
| 11         | 189        | 1421       | 5.302     | 25                | ✓                  |               |     | ✓   | ✓   | ✓   |     | ✓   |      | ✓    |    |                 |   |                     |
| 12         | 190        |            |           | 15                | ✓                  |               |     |     | ✓   | ✓   |     |     |      |      |    |                 |   |                     |
| 13         | 191        |            |           | 15                | ✓                  |               |     |     |     |     |     | ✓   | ✓    | ✓    | ✓  | ✓               | ✓ |                     |
| 14         | 192        | 1417       | 6.554     | 10                | ✓                  |               |     | ✓   | ✓   | ✓   |     | ✓   |      | ✓    |    |                 |   |                     |
| 15         | 193        | 1414       | 7.880     | 5                 | ✓                  |               |     | ✓   | ✓   | ✓   |     |     |      |      |    |                 |   |                     |
| 16         | 194        |            |           | 5                 | ✓                  |               |     |     |     |     |     | ✓   | ✓    | ✓    | ✓  | ✓               | ✓ |                     |
| 17         | 195        | 1206       | 9.039     | 0                 | ✓                  |               |     | ✓   | ✓   | ✓   |     | ✓   |      | ✓    |    |                 |   |                     |
| 18         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 19         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 20         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 21         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 22         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 23         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |
| 24         |            |            |           |                   |                    |               |     |     |     |     |     |     |      |      |    |                 |   |                     |

Comments:

SHIP: Vector  
ENTERED BY: H  
CHECKED BY: H

Bottom Depth:

Cast # down: 278  
Cast # up: 278

| Time    | LOC | UTC |
|---------|-----|-----|
| Begin:  | 23  | 26  |
| Bottom: | 23  | 31  |
| End:    | 23  | 46  |

START POSITION (GPS)  
LAT: 49 24 154  
LONG: 124 9 275

BOTTOM POSITION (GPS)  
LAT: 49 24 127  
LONG: 124 9 280

END POSITION (GPS)  
LAT: 49 24 082  
LONG: 124 12 04

ROSETTE LOG

MISSION ID: 2004-08 STATION: 03 CAST NUMBER: 50 UTC DATE (dd/mm/yyyy): 30/04/2008

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |   |     |  |     |  |     |  |  |  |  |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|---|-----|--|-----|--|-----|--|--|--|--|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |   | NUT |  | TCO |  | C13 |  |  |  |  |  |  |
| 1          | 196        | 1195       | 2.425     | 007-5             | ✓                  | ✓             |   |     |  |     |  |     |  |  |  |  |  |  |
| 2          | 197        | 1142       | 2.444     | 200               | ✓                  | ✓             |   |     |  |     |  |     |  |  |  |  |  |  |
| 3          | 198        | 1175       | 2.681     | 250               | ✓                  | ✓             |   |     |  |     |  |     |  |  |  |  |  |  |
| 4          | 199        | 1153       | 3.354     | 200               | ✓                  | ✓             |   |     |  |     |  |     |  |  |  |  |  |  |
| 5          | 200        | 1138       | 3.688     | 175               | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 6          | 201        | 1158       | 4.162     | 150               | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 7          | 202        | 1146       | 4.546     | 125               | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 8          | 203        | 1430       | 4.611     | 100               | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 9          | 204        | 1425       | 4.352     | 75                | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 10         | 205        | 1426       | 4.111     | 50                | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 11         | 206        | —          |           | 35                | ✓                  |               | — |     |  |     |  |     |  |  |  |  |  |  |
| 12         | 207        | 1427       | 5.849     | 25                | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 13         | 208        | —          |           | 15                | ✓                  |               | — |     |  |     |  |     |  |  |  |  |  |  |
| 14         | 209        | 1429       | 7.046     | 10                | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 15         | 210        | 1429       | 7.783     | 5                 | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 16         | 211        | 1431       | 8.346     | 0                 | ✓                  |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |   |     |  |     |  |     |  |  |  |  |  |  |

SHIP:

ENTERED BY: 

CHECKED BY:

Bottom Depth: 315

Cast # down: 50

Cast # up: 50

Time

LOC

UTC

Begin: 2 29

Bottom: 2 35

End:

START POSITION (GPS)

LAT: 49 26 53.7

LONG: 124 20 108

BOTTOM POSITION (GPS)

LAT: 49 26 50.1

LONG: 124 20 000

END POSITION (GPS)

LAT: 49 26 43

LONG: 124 19 795

ROSETTE LOG

MISSION ID: 2004-08 STATION: 6 CAST NUMBER: 52 UTC DATE (dd/mm/yyyy): 30/04/2004

| 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          | 212        | 1336       | 3.533     | 6-5               | ✓ 185              |               |     | X   | XX |     |  |     |  |  |  |  |  |                                                        |
| 2          | 213        | 1334       | 3.569     | 175               | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 3          | 214        | 1340       | 3.867     | 150               | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 4          | 215        | 1344       | 4.369     | 125               | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 5          | 216        | 1356       | 4.616     | 100               | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 6          | 217        | 1351       | 4.156     | 75                | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 7          | 218        | 1352       | 4.608     | 50                | ✓                  |               |     | ↓   |    |     |  |     |  |  |  |  |  |                                                        |
| 8          | 219        |            |           | 35                | ✓                  |               |     |     |    |     |  | XX  |  |  |  |  |  |                                                        |
| 9          | 220        | 1353       | 6.237     | 25                | ✓                  |               |     | X   |    |     |  |     |  |  |  |  |  | (note to me - check sample #'s)                        |
| 10         | 221        |            |           | 15                | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 11         | 222        | 364        | 7.114     | 10                | ✓                  |               |     | X   |    |     |  |     |  |  |  |  |  |                                                        |
| 12         | 223        | 1130       | *7.595    | 5                 | ✓                  |               |     |     |    |     |  |     |  |  |  |  |  | * lots of undissolved particles in sample (cleaned up) |
| 13         | 224        | 535        | 8.466     | 0                 | ✓                  |               |     | ↓   | ↓  |     |  | ↓   |  |  |  |  |  |                                                        |
| 14         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 15         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 16         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 17         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 18         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 19         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 20         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 21         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 22         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 23         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |
| 24         |            |            |           |                   |                    |               |     |     |    |     |  |     |  |  |  |  |  |                                                        |

Comments:

SHIP: Vector

ENTERED BY: ST

CHECKED BY:

Bottom Depth: 192

Cast # down: 52

Cast # up:

TimeLOCUTC

Begin:0435

Bottom:0439

End:0453

START POSITION (GPS)

LAT: 49°30.60

LONG: 124°27.72

BOTTOM POSITION (GPS)

LAT: 49°30.58

LONG: 124°27.71

END POSITION (GPS)

LAT:

LONG:

ROSETTE LOG

MISSION ID: 2004-08 STATION: 9 CAST NUMBER: 0056 UTC DATE (dd/mm/yyyy): 30/04/04

| 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          | 225        | 1389       | 2.954     | 164.5             | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 2          | 226        | 708        | 3.320     | 150               | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 3          | 227        | 1135       | 3.828     | 125               | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 4          | 228        | 1176       | 4.026     | 100               | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 5          | 229        | 1136       | 4.066     | 75                | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 6          | 230        | 1137       | 4.966     | 50                | ✓                  |               | ✓   | ✓✓  |  |     |     |     |     |  |  |  |  |  |
| 7          | 231        |            |           | 35                | ✓                  |               |     | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 8          | 232        | 657        | 6.261     | 25                | ✓                  |               | ✓   | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 9          | 233        |            |           | 15                | ✓                  |               |     | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 10         | 234        | 1391       | 7.215     | 10                | ✓                  |               | ✓   | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 11         | 235        | 1393       | 7.845     | 5                 | ✓                  |               | ✓   | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 12         | 236        | 1394       | 7.970     | 0                 | ✓                  |               | ✓   | ✓✓  |  |     |     | ✓✓  |     |  |  |  |  |  |
| 13         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 14         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 15         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 16         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |

Comments:

SHIP: VECTOR

ENTERED BY: CW

CHECKED BY:

Bottom Depth: 168

Cast # down: 0056

Cast # up: 56

| Time    | LOC | UTC |
|---------|-----|-----|
| Begin:  |     | 814 |
| Bottom: |     | 819 |
| End:    |     | 832 |

START POSITION (GPS)

LAT: 49 35 50

LONG: 124 38 35

BOTTOM POSITION (GPS)

LAT: 49 35 52

LONG: 124 38 34

END POSITION (GPS)

LAT: 49 35 50

LONG: 124 38 17



\*Note sample #s 238-252 were reused for cast #61 so for this cast the samples were remained 9238 to 9252 in the processed bottle files G. Gation

MISSION ID: 2004-08 STATION: 12 CAST NUMBER: 59 UTC DATE (dd/mm/yyyy): 30/04/04

| 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          | 237        | 1337       | 2.359     | BOT-5             | ✓353.4             |               |  | ✓✓  |  |     |  |     |  |  |  |              |
| 2          | 238        | 1386       | 2.878     | 300               | ✓299.92            |               |  | ✓   |  |     |  |     |  |  |  |              |
| 3          | 239        | 1461       | 3.193     | 250               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 4          | 240        | 1481       | 3.645     | 200               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 5          | 241        | 1402       | 3.723     | 175               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 6          | 242        | 1335       | 3.821     | 150               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 7          | 243        | 1225       | 4.276     | 125               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 8          | 244        | 1320       | 4.345     | 100               | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 9          | 245        | 1368       | 4.149     | 75                | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 10         | 246        | 1360       | 4.544     | 50                | ✓                  |               |  | ✓   |  |     |  |     |  |  |  |              |
| 11         | 247        |            |           | 35                | ✓                  |               |  |     |  |     |  | ✓✓  |  |  |  |              |
| 12         | 248        | 1379       | 4.894     | 25                | ✓                  |               |  | ✓   |  |     |  | ✓✓  |  |  |  |              |
| 13         | 249        |            |           | 15                | ✓                  |               |  |     |  |     |  | ✓✓  |  |  |  | flask broken |
| 14         | 250        | 1374       | 5.868     | 10                | ✓                  |               |  | ✓   |  |     |  | ✓✓  |  |  |  |              |
| 15         | 251        | 1373       | 6.717     | 5                 | ✓4.97              |               |  | ✓   |  |     |  | ✓✓  |  |  |  |              |
| 16         | 252        | 1376       | 7.822     | 0                 | ✓1.28              |               |  | ✓   |  |     |  | ✓✓  |  |  |  |              |
| 17         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 18         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 19         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 20         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 21         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 22         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 23         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |
| 24         |            |            |           |                   |                    |               |  |     |  |     |  |     |  |  |  |              |

SHIP: VECTOR  
ENTERED BY:  
CHECKED BY:

Bottom Depth: 360

Cast # down: 59  
Cast # up: 59

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1029 |
| Bottom: |     | 1037 |
| End:    |     | 1057 |

START POSITION (GPS)  
LAT: 49 43 613  
LONG: 124 40 790

BOTTOM POSITION (GPS)  
LAT: 49 43 615  
LONG: 124 40 730

END POSITION (GPS)  
LAT: 49 43 578  
LONG: 124 40 717

Comments: forgot to get salinity

ROSETTE LOG

MISSION ID: 2004-08 STATION: 14 CAST NUMBER: 61 UTC DATE (dd/mm/yyyy): 30/04/2004

| 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          | 238        | 1224       | 2.791     | 307.5             | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 2          | 239        | 1321       | 2.811     | 300               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 3          | 240        | 1380       | 3.468     | 250               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 4          | 241        | 1381       | 3.724     | 200               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 5          | 242        | 1382       | 4.026     | 175               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 6          | 243        | 1383       | 4.123     | 150               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 7          | 244        | 1188       | 4.175     | 125               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 8          | 245        | 1385       | 3.960     | 100               | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 9          | 246        | 1386       | 3.965     | 75                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 10         | 247        | 727        | 4.624     | 50                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 11         | 248        |            |           | 35                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 12         | 249        | 1349       | 6.044     | 25                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 13         | 250        |            |           | 15                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 14         | 251        | 1216       | 7.129     | 10                | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 15         | 252        | 1223       | 7.727     | 5                 | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 16         | 253        | 1224       | 7.980     | 0                 | ✓                  |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |  |  |  |  |  |

Comments:

SHIP: Vector  
ENTERED BY:  
CHECKED BY:

Bottom Depth: 310

Cast # down: 61  
Cast # up: 61

Time LOC UTC  
Begin: 1311  
Bottom: 1318  
End: 1334

START POSITION (GPS)  
LAT: 49 53 00  
LONG: 124 58 587

BOTTOM POSITION (GPS)  
LAT: 49 53 058  
LONG: 124 59 656

END POSITION (GPS)  
LAT: 49 51 738  
LONG: 125 1 740

ROSETTE LOG

MISSION ID: 2004-08 STATION: 23 CAST NUMBER: 64 UTC DATE (dd/mm/yyyy): 30/04/2004

| 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          | 254        | 1403       | 5.690     | 800-5             | ✓ 230              | ✓             | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 2          | 255        | 1404       | 5.695     | 200               | ✓                  | ✓             | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 3          | 256        | 1406       | 5.659     | 175               | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 4          | 257        | 1407       | 5.666     | 150               | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 5          | 258        | 1410       | 5.535     | 125               | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 6          | 259        | 1411       | 5.529     | 100               | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 7          | 260        | 1424       | 5.503     | 75                | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 8          | 261        | 1422       | 5.512     | 50                | ✓                  |               | ✓   | ✓   |  |     |     |     |     |   |  |  |  |                       |
| 9          | 262        |            |           | 35                | ✓                  |               |     | ✓   |  |     |     |     | ✓   | ✓ |  |  |  |                       |
| 10         | 263        | 1421       |           | 25                | ✓                  |               | ✓   | ✓   |  |     |     |     | ✓   | ✓ |  |  |  | 0.986 ml - completely |
| 11         | 264        |            |           | 15                | ✓                  |               |     | ✓   |  |     |     |     | ✓   | ✓ |  |  |  | quit                  |
| 12         | 265        | 1417       | 5.620     | 10                | ✓                  |               | ✓   | ✓   |  |     |     |     | ✓   | ✓ |  |  |  | * check in oxy. cont. |
| 13         | 266        | 1404       | 5.598     | 5                 | ✓                  |               | ✓   | ✓   |  |     |     |     | ✓   | ✓ |  |  |  |                       |
| 14         | 267        | 1206       | 5.621     | 0                 | ✓                  |               | ✓   | ✓   |  |     |     |     | ✓   | ✓ |  |  |  |                       |
| 15         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 16         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 17         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 18         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |     |   |  |  |  |                       |

Comments:

SHIP: Vector  
ENTERED BY: ST/MQ  
CHECKED BY:

Bottom Depth: 237

Cast # down: 64  
Cast # up:

| Time    | LOC  | UTC  |
|---------|------|------|
| Begin:  | 1808 | 1708 |
| Bottom: | 1014 | 1714 |
| End:    | 1029 | 1729 |

START POSITION (GPS)  
LAT: 50 15.00  
LONG: 125 23.01

BOTTOM POSITION (GPS)  
LAT: 50 14.964  
LONG: 125 22.992

END POSITION (GPS)  
LAT: 50 14.899  
LONG: 125 23.053

ROSETTE LOG

MISSION ID: 2004-08 STATION: 16 CAST NUMBER: 65 UTC DATE (dd/mm/yyyy): Apr 30/04

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |                 |     |     |     |      |     |     |   |  |                                  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----------------|-----|-----|-----|------|-----|-----|---|--|----------------------------------|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |                 | TCO |     | C13 |      | S-F |     |   |  |                                  |
|            |            |            |           |                   |                    |               | OXY |     | NH <sub>4</sub> | ALK | CHL | Chl | CDOM | HPC | HTO |   |  |                                  |
| 1          | 268        | 1336       | 4.034     | Bot-5             | ✓ 152.48           |               | ✓   | ✓   |                 |     |     |     |      |     |     |   |  |                                  |
| 2          | 269        | 1334       | 4.148     | 125               | ✓ 125.10           |               | ✓   | ✓   |                 |     |     |     |      |     |     |   |  |                                  |
| 3          | 270        | 1340       | 4.563     | 100               | ✓                  |               | ✓   | ✓   |                 |     |     |     |      |     |     |   |  |                                  |
| 4          | 271        | 1344       | 4.716     | 75                | ✓                  |               | ✓   | ✓   | ✓               |     |     |     |      |     |     |   |  |                                  |
| 5          | 272        | 1350       | 4.893     | 50                | ✓                  |               | ✓   | ✓   | ✓               |     |     |     |      |     |     |   |  |                                  |
| 6          | 273        | 1351       |           | 35                | ✓                  |               | ✓   | ✓   | ✓               |     |     | ✓   |      | ✓   |     |   |  |                                  |
| 7          | 274        | 1351       | 5.027     | 25                | ✓                  |               | ✓   | ✓   | ✓               |     |     | ✓   |      | ✓   |     |   |  |                                  |
| 8          | 275        |            |           | 15                | ✓                  |               |     | ✓   | ✓               |     |     |     |      | ✓   |     |   |  |                                  |
| * 9        | 276        |            |           | 15                | * ✓                |               |     |     |                 |     |     | ✓   | ✓    | ✓   | ✓   | ✓ |  |                                  |
| 10         | 277        | 1352       | 5.151     | 10                | ✓                  |               | ✓   | ✓   | ✓               |     |     | ✓   |      | ✓   |     |   |  |                                  |
| 11         | 278        | 1353       | 5.554     | 5                 | * ✓ 5.25           |               | ✓   | ✓   | ✓               |     |     |     |      |     |     |   |  | (during sample this is oxy comp) |
| * 12       | 279        |            |           | 5                 | * ✓                |               |     |     |                 |     |     | ✓   | ✓    | ✓   | ✓   | ✓ |  |                                  |
| 13         | 280        | 364        | 6.187     | 0                 | ✓ 1.56             |               | ✓   | ✓   | ✓               |     |     | ✓   |      | ✓   |     |   |  |                                  |
| 14         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 15         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 16         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 17         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 18         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 19         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 20         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 21         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 22         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 23         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |
| 24         |            |            |           |                   |                    |               |     |     |                 |     |     |     |      |     |     |   |  |                                  |

Comments:

SHIP: Vector  
ENTERED BY: CW  
CHECKED BY:

Bottom Depth:

Cast # down: 0065  
Cast # up: 0065

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 1922 |
| Bottom: |     | 1925 |
| End:    |     | 1936 |

START POSITION (GPS)  
LAT: 49 57 695  
LONG: 125 8 778

BOTTOM POSITION (GPS)  
LAT: 49 57 688  
LONG: 125 8 764

END POSITION (GPS)  
LAT: 49 57 684  
LONG: 125 8 756

ROSETTE LOG

MISSION ID: 2004-08 STATION: 19 CAST NUMBER: 068 UTC DATE (dd/mm/yyyy): 30/04/04

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |     |     |  |     |     |      |      |      |  |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|-----|-----|--|-----|-----|------|------|------|--|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |     | TCO |  | CI3 |     | ST   |      |      |  |  |
|            |            |            |           |                   |                    |               | OXY |     | NH4 | ALK |  | CHL | chl | CDOM | HPLC | phyc |  |  |
| 1          | 281        |            |           | Bot - 5           | ✓ 259.03           | ✓             |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 2          | 282        |            |           | 250               | ✓ 249.85           | ✓             |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 3          | 283        |            |           | 200               | ✓                  | ✓             |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 4          | 284        |            |           | 175               | ✓                  |               |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 5          | 285        |            |           | 150               | ✓                  |               |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 6          | 286        |            |           | 125               | ✓                  |               |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 7          | 287        |            |           | 100               | ✓                  |               |     | ✓   |     |     |  |     |     |      |      |      |  |  |
| 8          | 288        |            |           | 75                | ✓                  |               |     | ✓   | ✓   |     |  |     |     |      |      |      |  |  |
| 9          | 289        |            |           | 50                | ✓                  |               |     | ✓   | ✓   |     |  |     |     |      |      |      |  |  |
| 10         | 290        |            |           | 35                | ✓ 84.67            |               |     | ✓   | ✓   |     |  | ✓✓  |     |      |      |      |  |  |
| 11         | 291        |            |           | 25                | ✓                  |               |     | ✓   | ✓   |     |  | ✓✓  |     | ✓✓   |      |      |  |  |
| 12         | 292        |            |           | 15                | ✓                  |               |     | ✓   | ✓   |     |  |     |     |      |      |      |  |  |
| 13         | 293        |            |           | 15                | ✓                  |               |     |     |     |     |  | ✓✓  | ✓✓  | ✓✓   | ✓✓   | ✓✓   |  |  |
| 14         | 294        |            |           | 10                | ✓                  |               |     | ✓   | ✓   |     |  | ✓✓  |     | ✓✓   |      |      |  |  |
| 15         | 295        |            |           | 5                 | ✓                  |               |     | ✓   | ✓   |     |  |     |     |      |      |      |  |  |
| 16         | 296        |            |           | 5                 | ✓                  |               |     |     |     |     |  | ✓✓  | ✓✓  | ✓✓   | ✓✓   | ✓✓   |  |  |
| 17         | 297        |            |           | 0                 | ✓ 1.31             |               |     | ✓   | ✓   |     |  | ✓✓  |     | ✓✓   |      |      |  |  |
| 18         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 19         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 20         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 21         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 22         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 23         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |
| 24         |            |            |           |                   |                    |               |     |     |     |     |  |     |     |      |      |      |  |  |

Comments:

SHIP:  
ENTERED BY: CW  
CHECKED BY:

Bottom Depth:

Cast # down: 068  
Cast # up: 068

| Time    | LOC | UTC  |
|---------|-----|------|
| Begin:  |     | 2133 |
| Bottom: |     | 2139 |
| End:    |     | 2155 |

START POSITION (GPS)  
LAT: 50 1 136  
LONG: 124 53 012

BOTTOM POSITION (GPS)  
LAT: 50 1 078  
LONG: 124 53 022

END POSITION (GPS)  
LAT: 50 1 037  
LONG: 124 53 106

ROSETTE LOG

MISSION ID: 2004-08 STATION: 26 CAST NUMBER: 69 UTC DATE (dd/mm/yyyy): 1/05/2004

| Niskin No. | Sample No. | OXY. Flask | OXY. ml/l | ROSETTE OPERATION |                    | Samples taken |     |     |  |     |     |     |      |     |     |     |  |
|------------|------------|------------|-----------|-------------------|--------------------|---------------|-----|-----|--|-----|-----|-----|------|-----|-----|-----|--|
|            |            |            |           | Sample Depth      | Confirmed pressure | SAL           |     | NUT |  | TCO |     | C13 |      |     |     |     |  |
|            |            |            |           |                   |                    |               | OXY |     |  | ALK | SEC | CHL | CDOM | NH4 | NO3 | PHT |  |
| 1          | 298        |            |           | 305               | ✓                  | ✓             |     |     |  |     |     |     |      |     |     |     |  |
| 2          | 299        |            |           | 300               | ✓                  | ✓             |     |     |  |     |     |     |      |     |     |     |  |
| 3          | 300        |            |           | 250               | ✓                  | ✓             |     |     |  |     |     |     |      |     |     |     |  |
| 4          | 301        |            |           | 200               | ✓                  | ✓             |     |     |  |     |     |     |      |     |     |     |  |
| 5          | 302        |            |           | 175               | ✓                  |               |     |     |  |     |     |     |      |     |     |     |  |
| 6          | 303        |            |           | 150               | ✓                  |               |     |     |  |     |     |     |      |     |     |     |  |
| 7          | 304        |            |           | 125               | ✓                  |               |     |     |  |     |     |     |      |     |     |     |  |
| 8          | 305        |            |           | 100               | ✓                  |               |     |     |  |     |     |     |      |     |     |     |  |
| 9          | 306        |            |           | 75                | ✓                  |               |     |     |  |     |     |     |      | ✓   |     |     |  |
| 10         | 307        |            |           | 50                | ✓                  |               |     |     |  |     |     |     |      | ✓   |     |     |  |
| 11         | 308        |            |           | 35                | ✓                  |               |     |     |  |     |     | ✓   |      | ✓   |     |     |  |
| 12         | 309        |            |           | 25                | ✓                  |               |     |     |  |     |     | ✓   | ✓    | ✓   |     |     |  |
| 13         | 310        |            |           | 15                | ✓                  |               |     |     |  |     |     | ✓   |      | ✓   | ✓   | ✓   |  |
| 14         | 311        |            |           | 15                | ✓                  |               |     |     |  |     |     | ✓   | ✓    | ✓   |     |     |  |
| 15         | 312        |            |           | 10                | ✓                  |               |     |     |  |     |     | ✓   | ✓    | ✓   | ✓   |     |  |
| 16         | 313        |            |           | 5                 | ✓                  |               |     |     |  |     |     | ✓   |      | ✓   | ✓   | ✓   |  |
| 17         | 314        |            |           | 5                 | ✓                  |               |     |     |  |     |     | ✓   |      | ✓   |     |     |  |
| 18         | 315        |            |           | 0                 | ✓                  |               |     |     |  |     |     | ✓   | ✓    | ✓   |     |     |  |
| 19         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |
| 20         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |
| 21         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |
| 22         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |
| 23         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |
| 24         |            |            |           |                   |                    |               |     |     |  |     |     |     |      |     |     |     |  |

Comments:

SHIP:  
ENTERED BY:   
CHECKED BY:

Bottom Depth:

Cast # down: 69  
Cast # up: 69

| Time    | LOC  | UTC |
|---------|------|-----|
| Begin:  | 0012 |     |
| Bottom: | 0018 |     |
| End:    | 0035 |     |

START POSITION (GPS)  
LAT: 49 47 131  
LONG: 124 32 110

BOTTOM POSITION (GPS)  
LAT: 49 47 087  
LONG: 124 32 071

END POSITION (GPS)  
LAT: 49 46 982  
LONG: 124 31 984