

Table 11b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Ratio5</u> | <u>Ratio6</u> | <u>Ratio7</u> | <u>Ratio8</u> | <u>Ratio9</u> | <u>Ratio10</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| 4260.00      | Sh/Clst          | 0.19          | 48.18         | 71.73         | 1.94          | 0.72          | 0.57          | 0.47          | 0.56          | 0.93          | 2.45           | 0014-1        |
| 4314.00      | Sh/Clst          | 0.15          | -             | 82.22         | 2.08          | 1.00          | 0.61          | 0.51          | 0.70          | -             | 2.31           | 0019-1        |
| 4335.00      | Sh/Clst          | 0.13          | -             | 80.97         | 1.43          | 1.00          | 0.70          | 0.53          | 0.68          | -             | 2.13           | 0022-1        |
| 4339.50      | bulk             | 0.33          | 45.13         | 76.67         | 1.82          | 0.78          | 0.73          | 0.59          | 0.62          | 0.82          | 2.99           | 0001-0        |
| 4343.00      | bulk             | 0.47          | 52.75         | 75.35         | 1.33          | 0.74          | 0.60          | 0.45          | 0.60          | 1.12          | 3.24           | 0004-0        |
| 4348.86      | bulk             | 0.40          | 47.89         | 71.99         | 1.22          | 0.73          | 0.65          | 0.47          | 0.56          | 0.92          | 2.47           | 0009-0        |
| 4398.63      | bulk             | 0.38          | -             | 83.63         | 1.59          | 1.00          | 0.64          | 0.44          | 0.72          | -             | 2.55           | 0011-0        |
| 4399.40      | bulk             | 0.42          | -             | 83.95         | 0.98          | 1.00          | 0.39          | 0.31          | 0.72          | -             | 2.62           | 0012-0        |
| 4701.00      | bulk             | 0.15          | -             | 76.07         | 1.82          | 1.00          | 0.81          | 0.70          | 0.61          | -             | 1.59           | 0023-0        |

List of Sterane Distribution Ratios

Ratio 1:  $27d\beta S / 27d\beta S + 27aaR$

Ratio 2:  $29aaS / 29aaS + 29aaR$  (%)

Ratio 3:  $2 * (29\beta\beta R + 29\beta\beta S) / (29aaS + 29aaR + 2 * (29\beta\beta R + 29\beta\beta S))$  (%)

Ratio 4:  $27d\beta S + 27d\beta R + 27daR + 27daS / 29d\beta S + 29d\beta R + 29daR + 29daS$

Ratio 5:  $29\beta\beta R + 29\beta\beta S / 29\beta\beta R + 29\beta\beta S + 29aaS$

Ratio 6:  $21a + 22a / 21a + 22a + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 7:  $21a + 22a / 21a + 22a + 28daS + 28aaS + 29daR + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 8:  $29\beta\beta R + 29\beta\beta S / 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 9:  $29aaS / 29aaR$

Ratio 10:  $29\beta\beta R + 29\beta\beta S / 29aaR$

Table 11c: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | 23/3                   | 24/3                 | 25/3                 | 24/4               | 26/3               | 27Ts                 | 27Tm               | 28aβ               | 25nor30aβ          | Sample |
|---------|-----------|------------------------|----------------------|----------------------|--------------------|--------------------|----------------------|--------------------|--------------------|--------------------|--------|
|         |           | 29aβ                   | 29Ts                 | 30d                  | 29βa               | 300                | 30aβ                 | 30βa               | 30G                | 31aβS              |        |
|         |           | 31aβR                  | 32aβS                | 32aβR                | 33aβS              | 33aβR              | 34aβS                | 34aβR              | 35aβS              | 35aβR              |        |
| 4260.00 | Sh/Clst   | 68.1<br>52.3<br>36.2   | 18.6<br>26.5<br>0.0  | 0.0<br>16.2<br>0.0   | 19.2<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0  | 39.9<br>92.8<br>0.0  | 24.7<br>0.0<br>0.0 | 17.3<br>0.0<br>0.0 | 0.0<br>50.7<br>0.0 | 0014-1 |
| 4314.00 | Sh/Clst   | 51.8<br>17.1<br>0.0    | 15.7<br>14.5<br>0.0  | 14.5<br>0.0<br>0.0   | 12.5<br>0.0<br>0.0 | 6.1<br>0.0<br>0.0  | 0.0<br>21.9<br>0.0   | 0.0<br>0.0<br>0.0  | 13.0<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0  | 0019-1 |
| 4335.00 | Sh/Clst   | 90.2<br>30.1<br>0.0    | 24.1<br>0.0<br>0.0   | 11.5<br>24.6<br>0.0  | 18.3<br>0.0<br>0.0 | 8.7<br>0.0<br>0.0  | 21.5<br>60.1<br>0.0  | 17.7<br>0.0<br>0.0 | 14.7<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0  | 0022-1 |
| 4339.50 | bulk      | 137.8<br>30.1<br>20.8  | 48.9<br>17.7<br>0.0  | 23.3<br>5.9<br>0.0   | 22.7<br>0.0<br>0.0 | 18.7<br>0.0<br>0.0 | 18.8<br>51.7<br>0.0  | 15.7<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0  | 0.0<br>16.1<br>0.0 | 0001-0 |
| 4343.00 | bulk      | 168.9<br>119.6<br>47.6 | 51.4<br>34.8<br>45.0 | 33.9<br>38.2<br>35.8 | 31.4<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0  | 82.0<br>147.0<br>0.0 | 0.0<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0  | 0.0<br>62.9<br>0.0 | 0004-0 |

Depth unit of measure: m

| Depth   | Lithology | 23/3                   | 24/3                 | 25/3                 | 24/4                | 26/3               | 27Ts                 | 27Tm                | 28aß              | 25nor30aß           | Sample |
|---------|-----------|------------------------|----------------------|----------------------|---------------------|--------------------|----------------------|---------------------|-------------------|---------------------|--------|
|         |           | 29aß                   | 29Ts                 | 30d                  | 29ßa                | 300                | 30aß                 | 30ßa                | 30G               | 31aßS               |        |
|         |           | 31aßR                  | 32aßS                | 32aßR                | 33aßS               | 33aßR              | 34aßS                | 34aßR               | 35aßS             | 35aßR               |        |
| 4348.86 | bulk      | 372.3<br>147.6<br>36.3 | 245.4<br>0.0<br>29.3 | 86.9<br>24.3<br>27.0 | 77.8<br>0.0<br>0.0  | 68.7<br>0.0<br>0.0 | 96.8<br>179.3<br>0.0 | 54.8<br>24.8<br>0.0 | 0.0<br>0.0<br>0.0 | 67.8<br>66.4<br>0.0 | 0009-0 |
| 4398.63 | bulk      | 134.1<br>60.4<br>23.4  | 40.6<br>29.2<br>22.1 | 19.9<br>13.6<br>19.4 | 36.5<br>14.4<br>0.0 | 13.4<br>0.0<br>0.0 | 47.7<br>80.4<br>0.0  | 0.0<br>17.1<br>0.0  | 0.0<br>0.0<br>0.0 | 0.0<br>36.7<br>0.0  | 0011-0 |
| 4399.40 | bulk      | 48.5<br>77.6<br>24.5   | 22.0<br>49.5<br>18.9 | 0.0<br>27.9<br>21.1  | 0.0<br>25.7<br>0.0  | 0.0<br>0.0<br>0.0  | 65.3<br>120.6<br>0.0 | 22.4<br>28.1<br>0.0 | 0.0<br>0.0<br>0.0 | 0.0<br>41.4<br>0.0  | 0012-0 |
| 4701.00 | bulk      | 155.8<br>25.2<br>13.5  | 44.3<br>10.4<br>0.0  | 23.2<br>16.5<br>0.0  | 36.0<br>0.0<br>0.0  | 12.5<br>0.0<br>0.0 | 18.4<br>34.0<br>0.0  | 12.2<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0 | 0.0<br>11.7<br>0.0  | 0023-0 |

Table 11d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | 21a         | 22a          | 27dBS        | 27dBR          | 27daR        | 27daS        | 28dBS        | 28dBR        | 28daR*       | Sample |        |
|---------|-----------|-------------|--------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------|--------|
|         |           | 29dBS*      | 28daS*       | 27aaR        | 29dBR          | 29daR        | 28aaS        | 29daS*       | 28BS         |              |        |        |
|         |           | 28aaR       | 29aaS        | 29BSR        | 29BS           | 29aaR        |              |              |              |              |        |        |
| 4260.00 | Sh/Clst   | 28.7<br>5.0 | 16.1<br>6.0  | 8.9<br>7.5   | 29.5<br>123.7  | 6.2<br>9.1   | 11.5<br>6.4  | 12.0<br>0.0  | 4.4<br>3.2   | 10.3<br>5.6  | 58.2   | 0014-1 |
| 4314.00 | Sh/Clst   | 17.5<br>2.7 | 8.7<br>0.0   | 6.3<br>4.0   | 13.8<br>79.5   | 3.7<br>5.0   | 6.2<br>4.6   | 5.0<br>0.0   | 3.3<br>0.0   | 0.0<br>3.3   | 47.9   | 0019-1 |
| 4335.00 | Sh/Clst   | 29.6<br>0.0 | 13.7<br>0.0  | 9.4<br>9.4   | 21.2<br>138.5  | 9.1<br>5.7   | 6.1<br>5.3   | 10.0<br>0.0  | 0.0<br>7.8   | 9.2<br>8.0   | 72.4   | 0022-1 |
| 4339.50 | bulk      | 51.1<br>0.0 | 13.8<br>4.3  | 18.6<br>10.0 | 40.6<br>12.8   | 9.8<br>5.1   | 11.2<br>5.3  | 11.2<br>4.8  | 4.9<br>4.9   | 14.2<br>8.5  | 35.1   | 0001-0 |
| 4343.00 | bulk      | 69.4<br>8.4 | 67.0<br>12.8 | 23.9<br>24.4 | 104.1<br>117.1 | 26.0<br>16.1 | 29.2<br>11.5 | 30.0<br>15.5 | 12.6<br>12.6 | 42.4<br>17.9 | 54.0   | 0004-0 |

\* 28daR coel with 27aaS, 29dBS coel with 27BSR, 28daS coel with 27BS, 29daS coel with 28BSR

Depth unit of measure: m

| Depth   | Lithology | 21a            | 22a          | 27d $\beta$ S        | 27d $\beta$ R        | 27daR        | 27daS        | 28d $\beta$ S | 28d $\beta$ R        | 28daR*       | Sample |
|---------|-----------|----------------|--------------|----------------------|----------------------|--------------|--------------|---------------|----------------------|--------------|--------|
|         |           | 29d $\beta$ S* | 28daS*       | 27aaR                | 29d $\beta$ R        | 29daR        | 28aaS        | 29daS*        | 28 $\beta$ $\beta$ S |              |        |
|         |           | 28aaR          | 29aaS        | 29 $\beta$ $\beta$ R | 29 $\beta$ $\beta$ S | 29aaR        |              |               |                      |              |        |
| 4348.86 | bulk      | 114.3<br>14.2  | 46.3<br>18.2 | 86.1<br>25.6         | 34.2<br>23.2         | 27.7<br>19.8 | 33.7<br>18.9 | 39.6<br>15.0  | 27.7<br>34.2         | 51.5<br>36.9 | 0009-0 |
| 4398.63 | bulk      | 39.1<br>0.0    | 10.7<br>0.0  | 38.2<br>10.6         | 17.1<br>9.4          | 13.4<br>7.8  | 13.5<br>7.4  | 20.4<br>8.1   | 9.9<br>9.4           | 26.3<br>10.2 | 0011-0 |
| 4399.40 | bulk      | 18.4<br>0.0    | 5.7<br>0.0   | 33.7<br>12.0         | 20.5<br>15.3         | 14.7<br>10.4 | 15.0<br>16.4 | 29.1<br>0.0   | 16.3<br>0.0          | 31.9<br>13.1 | 0012-0 |
| 4701.00 | bulk      | 62.7<br>5.1    | 17.4<br>0.0  | 34.2<br>5.8          | 4.3<br>6.1           | 8.6<br>7.5   | 8.2<br>0.0   | 7.6<br>0.0    | 8.2<br>5.4           | 91.3<br>7.8  | 0023-0 |

\* 28daR coel with 27aaS, 29d $\beta$ S coel with 27 $\beta$  $\beta$ R, 28daS coel with 27 $\beta$  $\beta$ S, 29daS coel with 28 $\beta$  $\beta$ R

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | 27 $\beta$ BR | 27 $\beta$ BS | 28 $\beta$ BR | 28 $\beta$ BS | 29 $\beta$ BR | 29 $\beta$ BS | 30 $\beta$ BR | 30 $\beta$ BS | Sample |
|---------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| 4260.00 | Sh/Clst   | 8.4           | 10.8          | 5.9           | 10.9          | 8.5           | 8.3           | 0.0           | 0.0           | 0014-1 |
| 4314.00 | Sh/Clst   | 5.9           | 7.2           | 4.1           | 7.0           | 8.2           | 6.6           | 0.0           | 0.0           | 0019-1 |
| 4335.00 | Sh/Clst   | 10.2          | 6.7           | 7.2           | 7.3           | 6.2           | 6.9           | 0.0           | 0.0           | 0022-1 |
| 4339.50 | bulk      | 20.0          | 12.1          | 7.9           | 10.7          | 7.9           | 8.4           | 0.0           | 0.0           | 0001-0 |
| 4343.00 | bulk      | 29.2          | 19.9          | 18.0          | 15.6          | 18.5          | 17.4          | 0.0           | 0.0           | 0004-0 |
| 4348.86 | bulk      | 43.3          | 46.9          | 26.2          | 34.5          | 27.9          | 29.9          | 0.0           | 0.0           | 0009-0 |
| 4398.63 | bulk      | 17.6          | 14.0          | 9.9           | 6.8           | 9.7           | 7.9           | 0.0           | 0.0           | 0011-0 |
| 4399.40 | bulk      | 18.8          | 11.9          | 14.1          | 14.6          | 10.2          | 11.5          | 0.0           | 0.0           | 0012-0 |
| 4701.00 | bulk      | 13.7          | 12.0          | 7.4           | 10.8          | 6.4           | 9.5           | 0.0           | 0.0           | 0023-0 |

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>25nor28aß</u> | <u>25nor30aß</u> | <u>Sample</u> |
|--------------|------------------|------------------|------------------|---------------|
| 4260.00      | Sh/Clst          | 0.0              | 0.0              | 0014-1        |
| 4314.00      | Sh/Clst          | 0.0              | 0.0              | 0019-1        |
| 4335.00      | Sh/Clst          | 0.0              | 0.0              | 0022-1        |
| 4339.50      | bulk             | 0.0              | 0.0              | 0001-0        |
| 4343.00      | bulk             | 0.0              | 0.0              | 0004-0        |
| 4348.86      | bulk             | 52.9             | 59.5             | 0009-0        |
| 4398.63      | bulk             | 0.0              | 0.0              | 0011-0        |
| 4399.40      | bulk             | 0.0              | 0.0              | 0012-0        |
| 4701.00      | bulk             | 0.0              | 0.0              | 0023-0        |



Table 11g: Amount of triterpanes (ppb) m/z 191 SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | 23/3                        | 24/3                       | 25/3                       | 24/4                 | 26/3                 | 27Ts                    | 27Tm                 | 28aß                 | 25nor30aß            | Sample |
|---------|-----------|-----------------------------|----------------------------|----------------------------|----------------------|----------------------|-------------------------|----------------------|----------------------|----------------------|--------|
|         |           | 29aß                        | 29Ts                       | 30d                        | 29ßa                 | 300                  | 30aß                    | 30ßa                 | 30G                  | 31aßS                |        |
|         |           | 31aßR                       | 32aßS                      | 32aßR                      | 33aßS                | 33aßR                | 34aßS                   | 34aßR                | 35aßS                | 35aßR                |        |
| 4260.00 | Sh/Clst   | 4046.2<br>3106.7<br>2153.6  | 1105.6<br>1574.8<br>0.0    | 0.0<br>964.6<br>0.0        | 1144.2<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0    | 2372.7<br>5516.6<br>0.0 | 1466.2<br>0.0<br>0.0 | 1030.1<br>0.0<br>0.0 | 0.0<br>3014.4<br>0.0 | 0014-1 |
| 4314.00 | Sh/Clst   | 3551.1<br>1174.1<br>0.0     | 1076.7<br>995.6<br>0.0     | 994.3<br>0.0<br>0.0        | 853.4<br>0.0<br>0.0  | 420.5<br>0.0<br>0.0  | 0.0<br>1499.0<br>0.0    | 0.0<br>0.0<br>0.0    | 892.5<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0    | 0019-1 |
| 4335.00 | Sh/Clst   | 5058.7<br>1685.2<br>0.0     | 1350.7<br>0.0<br>0.0       | 646.0<br>1376.3<br>0.0     | 1023.7<br>0.0<br>0.0 | 486.3<br>0.0<br>0.0  | 1204.0<br>3366.8<br>0.0 | 992.2<br>0.0<br>0.0  | 826.7<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0    | 0022-1 |
| 4339.50 | bulk      | 8729.3<br>1907.8<br>1321.2  | 3096.6<br>1124.3<br>0.0    | 1478.9<br>374.0<br>0.0     | 1441.6<br>0.0<br>0.0 | 1188.0<br>0.0<br>0.0 | 1190.6<br>3276.8<br>0.0 | 991.7<br>0.0<br>0.0  | 0.0<br>0.0<br>0.0    | 0.0<br>1017.7<br>0.0 | 0001-0 |
| 4343.00 | bulk      | 10967.5<br>7766.0<br>3093.9 | 3337.2<br>2262.6<br>2923.5 | 2203.5<br>2478.7<br>2327.8 | 2038.5<br>0.0<br>0.0 | 0.0<br>0.0<br>0.0    | 5323.2<br>9544.6<br>0.0 | 0.0<br>0.0<br>0.0    | 0.0<br>0.0<br>0.0    | 0.0<br>4085.2<br>0.0 | 0004-0 |

Depth unit of measure: m

| Depth   | Lithology | 23/3                         | 24/3                       | 25/3                       | 24/4                    | 26/3                 | 27Ts                     | 27Tm                    | 28aß              | 25nor30aß               | Sample |
|---------|-----------|------------------------------|----------------------------|----------------------------|-------------------------|----------------------|--------------------------|-------------------------|-------------------|-------------------------|--------|
|         |           | 29aß                         | 29Ts                       | 30d                        | 29ßa                    | 300                  | 30aß                     | 30ßa                    | 30G               | 31aßS                   |        |
|         |           | 31aßR                        | 32aßS                      | 32aßR                      | 33aßS                   | 33aßR                | 34aßS                    | 34aßR                   | 35aßS             | 35aßR                   |        |
| 4348.86 | bulk      | 28713.3<br>11384.9<br>2799.0 | 18923.4<br>0.0<br>2261.6   | 6699.4<br>1871.5<br>2081.8 | 6001.8<br>0.0<br>0.0    | 5294.7<br>0.0<br>0.0 | 7467.5<br>13828.1<br>0.0 | 4222.8<br>1909.5<br>0.0 | 0.0<br>0.0<br>0.0 | 5225.8<br>5121.9<br>0.0 | 0009-0 |
| 4398.63 | bulk      | 10784.1<br>4859.7<br>1881.0  | 3262.8<br>2349.9<br>1779.7 | 1596.6<br>1092.4<br>1562.0 | 2931.0<br>1158.2<br>0.0 | 1074.2<br>0.0<br>0.0 | 3835.4<br>6460.8<br>0.0  | 0.0<br>1372.3<br>0.0    | 0.0<br>0.0<br>0.0 | 0.0<br>2948.2<br>0.0    | 0011-0 |
| 4399.40 | bulk      | 6409.4<br>10253.6<br>3239.9  | 2901.5<br>6534.4<br>2499.7 | 0.0<br>3680.3<br>2784.5    | 0.0<br>3401.0<br>0.0    | 0.0<br>0.0<br>0.0    | 8630.8<br>15932.7<br>0.0 | 2957.8<br>3712.9<br>0.0 | 0.0<br>0.0<br>0.0 | 0.0<br>5466.0<br>0.0    | 0012-0 |
| 4701.00 | bulk      | 6672.0<br>1077.5<br>576.0    | 1895.7<br>447.0<br>0.0     | 992.7<br>707.3<br>0.0      | 1541.7<br>0.0<br>0.0    | 536.7<br>0.0<br>0.0  | 789.8<br>1457.0<br>0.0   | 523.3<br>0.0<br>0.0     | 0.0<br>0.0<br>0.0 | 0.0<br>501.1<br>0.0     | 0023-0 |

Table 11h: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | 21a                       | 22a                       | 27dBS                      | 27dBR                      | 27daR                     | 27daS                 | 28dBS            | 28dBR           | 28daR* | Sample |
|---------|-----------|---------------------------|---------------------------|----------------------------|----------------------------|---------------------------|-----------------------|------------------|-----------------|--------|--------|
|         |           | 29dBS*                    | 28daS*                    | 27aaR                      | 29dBR                      | 29daR                     | 28aaS                 | 29daS*           | 28BS            |        |        |
|         |           | 28aaR                     | 29aaS                     | 29BBR                      | 29BS                       | 29aaR                     |                       |                  |                 |        |        |
| 4260.00 | Sh/Clst   | 1704.4<br>955.3<br>295.4  | 530.3<br>445.3<br>355.1   | 1751.7<br>7356.4<br>395.7  | 366.8<br>670.9<br>539.3    | 685.6<br>382.0            | 715.4<br>0.0<br>261.3 | 612.3<br>190.1   | 334.6<br>575.9  | 3462.2 | 0014-1 |
| 4314.00 | Sh/Clst   | 1201.1<br>599.5<br>187.9  | 429.0<br>276.1<br>0.0     | 944.1<br>5445.6<br>381.5   | 252.3<br>346.3<br>342.6    | 427.3<br>313.1            | 343.0<br>0.0<br>224.5 | 0.0<br>0.0       | 223.4<br>364.4  | 3283.8 | 0019-1 |
| 4335.00 | Sh/Clst   | 1658.5<br>767.5<br>0.0    | 525.1<br>526.2<br>0.0     | 1186.7<br>7765.8<br>319.0  | 507.4<br>607.3<br>316.9    | 344.0<br>299.0            | 558.2<br>0.0          | 515.6<br>437.5   | 449.7<br>278.1  | 4059.7 | 0022-1 |
| 4339.50 | bulk      | 3239.5<br>875.8<br>0.0    | 1180.8<br>630.8<br>275.3  | 2574.0<br>5244.0<br>679.0  | 618.1<br>817.7<br>323.1    | 712.0<br>301.9<br>334.7   | 711.1<br>309.9        | 902.4<br>540.4   | 461.2<br>558.6  | 2224.2 | 0001-0 |
| 4343.00 | bulk      | 4505.7<br>4348.6<br>548.4 | 1555.0<br>1583.9<br>832.6 | 6760.4<br>7606.3<br>1364.7 | 1689.8<br>2721.3<br>1048.4 | 1893.8<br>1005.1<br>745.8 | 1951.3<br>820.6       | 2754.4<br>1161.5 | 1645.9<br>866.6 | 3506.5 | 0004-0 |

\* 28daR coel with 27aaS, 29dBS coel with 27BBR, 28daS coel with 27BS, 29daS coel with 28BBR

Depth unit of measure: m

| Depth   | Lithology | 21a                        | 22a                        | 27d $\beta$ S              | 27d $\beta$ R              | 27daR                      | 27daS            | 28d $\beta$ S         | 28d $\beta$ R           | 28daR* | Sample |
|---------|-----------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------|-----------------------|-------------------------|--------|--------|
|         |           | 29d $\beta$ S*             | 28daS*                     | 27aaR                      | 29d $\beta$ R              | 29daR                      | 28aaS            | 29daS*                | 28 $\beta$ $\beta$ S    |        |        |
|         |           | 28aaR                      | 29aaS                      | 29 $\beta$ $\beta$ R       | 29 $\beta$ $\beta$ S       | 29aaR                      |                  |                       |                         |        |        |
| 4348.86 | bulk      | 8812.3<br>4140.3<br>1095.6 | 3567.3<br>3676.5<br>1402.5 | 6637.3<br>9757.3<br>1974.3 | 2636.8<br>3284.5<br>1789.2 | 2136.4<br>1457.6<br>1526.1 | 2600.8<br>1156.1 | 3057.9<br>2640.2      | 2139.8<br>2846.4        | 3969.9 | 0009-0 |
| 4398.63 | bulk      | 3147.6<br>1561.7<br>0.0    | 860.8<br>1383.4<br>0.0     | 3069.2<br>5105.4<br>852.6  | 1378.2<br>1249.7<br>754.6  | 1076.0<br>595.7<br>629.4   | 1086.2<br>652.0  | 1642.5<br>754.2       | 799.6<br>823.6          | 2118.7 | 0011-0 |
| 4399.40 | bulk      | 2430.1<br>5190.6<br>0.0    | 754.7<br>1965.2<br>0.0     | 4458.6<br>6058.7<br>1586.7 | 2707.1<br>3937.0<br>2014.8 | 1939.0<br>2170.9<br>1376.7 | 1982.2<br>0.0    | 3838.9<br>0.0         | 2153.9<br>0.0<br>1730.8 | 4211.0 | 0012-0 |
| 4701.00 | bulk      | 2686.1<br>544.8<br>217.1   | 744.3<br>407.9<br>0.0      | 1466.2<br>8088.9<br>248.8  | 185.0<br>523.8<br>260.5    | 366.2<br>0.0<br>320.4      | 350.9<br>0.0     | 323.4<br>0.0<br>233.1 | 352.9<br>334.0          | 3907.6 | 0023-0 |

\* 28daR coel with 27aaS, 29d $\beta$ S coel with 27 $\beta$  $\beta$ R, 28daS coel with 27 $\beta$  $\beta$ S, 29daS coel with 28 $\beta$  $\beta$ R

Table 11i: Amount of standard and weight of sample for Well NOCS 25/10-6S

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Standard</u> | <u>Amount</u> | <u>Weight</u> | <u>Sample</u> |
|--------------|------------------|-----------------|---------------|---------------|---------------|
| 4260.00      | Sh/Clst          | 850.2           | 1.400         | 27.7          | 0014-1        |
| 4314.00      | Sh/Clst          | 553.6           | 1.400         | 36.9          | 0019-1        |
| 4335.00      | Sh/Clst          | 598.9           | 1.400         | 41.7          | 0022-1        |
| 4339.50      | bulk             | 3156.2          | 1.400         | 7.0           | 0001-0        |
| 4343.00      | bulk             | 5826.8          | 1.400         | 3.7           | 0004-0        |
| 4348.86      | bulk             | 2486.7          | 1.400         | 7.3           | 0009-0        |
| 4398.63      | bulk             | 3414.0          | 1.400         | 5.1           | 0011-0        |
| 4399.40      | bulk             | 2584.6          | 1.400         | 4.1           | 0012-0        |
| 4701.00      | bulk             | 1796.3          | 1.400         | 18.2          | 0023-0        |

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 25/10-6S

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Ratio5</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 4260.00      | Sh/Clst          | 0.89          | 0.84          | 0.73          | 0.75          | 0.84          | 0014-1        |
| 4314.00      | Sh/Clst          | 0.91          | 0.87          | 0.73          | 0.77          | 0.83          | 0019-1        |
| 4335.00      | Sh/Clst          | 0.93          | 0.90          | 0.75          | 0.80          | 0.82          | 0022-1        |
| 4339.50      | bulk             | 1.00          | 1.00          | 0.90          | 1.00          | 0.87          | 0001-0        |
| 4343.00      | bulk             | 1.00          | 1.00          | 1.00          | 1.00          | 1.00          | 0004-0        |
| 4348.86      | bulk             | 1.00          | 1.00          | 0.79          | 0.81          | 0.82          | 0009-0        |
| 4398.63      | bulk             | -             | -             | -             | -             | -             | 0011-0        |
| 4399.40      | bulk             | -             | -             | -             | -             | -             | 0012-0        |
| 4701.00      | bulk             | -             | -             | -             | -             | -             | 0023-0        |

Ratio1: a1 / a1 + g1

Ratio2: b1 / b1 + g1

Ratio3: a1 + b1 / a1 + b1 + c1 + d1 + e1 + f1 + g1

Ratio4: a1 / a1 + e1 + f1 + g1

Ratio5: a1 / a1 + d1

Table 12b: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 25/10-6S

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|
| 4260.00      | Sh/Clst          | 0.53          | 0.33          | 0.36          | 0.18          | 0014-1        |
| 4314.00      | Sh/Clst          | 0.46          | 0.26          | 0.31          | 0.20          | 0019-1        |
| 4335.00      | Sh/Clst          | 0.46          | 0.24          | 0.30          | 0.16          | 0022-1        |
| 4339.50      | bulk             | 0.44          | 0.25          | 0.31          | 0.19          | 0001-0        |
| 4343.00      | bulk             | 0.53          | 0.31          | 0.40          | 0.27          | 0004-0        |
| 4348.86      | bulk             | 0.29          | 0.22          | 0.18          | 0.11          | 0009-0        |
| 4398.63      | bulk             | 0.32          | 0.11          | 0.16          | 0.08          | 0011-0        |
| 4399.40      | bulk             | 0.19          | 0.12          | 0.06          | 0.04          | 0012-0        |
| 4701.00      | bulk             | 0.35          | 0.21          | 0.15          | 0.07          | 0023-0        |

Ratio1: A1 / A1 + E1  
 Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1  
 Ratio4: A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1

Table 12c: Aromatisation of Steranes (peak height) for Well NOCS 25/10-6S

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|
| 4260.00      | Sh/Clst          | 0.80          | 0.40          | 0014-1        |
| 4314.00      | Sh/Clst          | 0.82          | 1.00          | 0019-1        |
| 4335.00      | Sh/Clst          | 0.86          | 0.35          | 0022-1        |
| 4339.50      | bulk             | 0.90          | -             | 0001-0        |
| 4343.00      | bulk             | 1.00          | -             | 0004-0        |
| 4348.86      | bulk             | 0.90          | -             | 0009-0        |
| 4398.63      | bulk             | 1.00          | -             | 0011-0        |
| 4399.40      | bulk             | 1.00          | -             | 0012-0        |
| 4701.00      | bulk             | 1.00          | -             | 0023-0        |

$$\text{Ratio1: } \frac{\text{C1+D1+E1+F1+G1+H1+I1}}{\text{C1+D1+E1+F1+G1+H1+I1} + \text{c1+d1+e1+f1+g1}}$$

$$\text{Ratio2: } \text{g1} / \text{g1} + \text{I1}$$



Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | a1    | b1    | c1   | d1    | e1   | f1   | g1   | Sample |
|---------|-----------|-------|-------|------|-------|------|------|------|--------|
| 4260.00 | Sh/Clst   | 742.9 | 484.0 | 60.5 | 143.9 | 86.8 | 68.9 | 90.3 | 0014-1 |
| 4314.00 | Sh/Clst   | 508.4 | 308.2 | 49.7 | 101.6 | 57.8 | 44.7 | 47.6 | 0019-1 |
| 4335.00 | Sh/Clst   | 511.2 | 327.4 | 33.4 | 111.9 | 45.8 | 44.1 | 37.9 | 0022-1 |
| 4339.50 | bulk      | 351.2 | 144.6 | 0.0  | 53.9  | 0.0  | 0.0  | 0.0  | 0001-0 |
| 4343.00 | bulk      | 184.2 | 113.6 | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0004-0 |
| 4348.86 | bulk      | 602.4 | 410.8 | 0.0  | 136.7 | 66.0 | 71.7 | 0.0  | 0009-0 |
| 4398.63 | bulk      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0011-0 |
| 4399.40 | bulk      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0012-0 |
| 4701.00 | bulk      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0023-0 |

Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 25/10-6S

Depth unit of measure: m

| Depth   | Lithology | A1    | B1    | C1    | D1    | E1    | F1    | G1    | H1    | I1    | Sample |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 4260.00 | Sh/Clst   | 266.4 | 116.2 | 349.9 | 151.0 | 239.8 | 0.0   | 224.6 | 667.3 | 135.9 | 0014-1 |
| 4314.00 | Sh/Clst   | 258.0 | 104.3 | 294.9 | 133.4 | 299.1 | 0.0   | 278.5 | 414.3 | 0.0   | 0019-1 |
| 4335.00 | Sh/Clst   | 234.7 | 84.8  | 279.0 | 137.5 | 272.6 | 61.5  | 280.2 | 552.5 | 70.9  | 0022-1 |
| 4339.50 | bulk      | 84.1  | 35.3  | 25.5  | 48.0  | 105.6 | 0.0   | 83.5  | 238.2 | 0.0   | 0001-0 |
| 4343.00 | bulk      | 113.3 | 45.3  | 104.8 | 57.7  | 100.1 | 0.0   | 73.0  | 90.5  | 0.0   | 0004-0 |
| 4348.86 | bulk      | 171.5 | 119.0 | 403.5 | 210.4 | 417.1 | 117.5 | 368.7 | 921.0 | 0.0   | 0009-0 |
| 4398.63 | bulk      | 89.2  | 23.4  | 203.9 | 61.7  | 192.6 | 0.0   | 280.7 | 411.3 | 65.2  | 0011-0 |
| 4399.40 | bulk      | 29.1  | 16.2  | 194.5 | 0.0   | 121.8 | 0.0   | 372.2 | 489.8 | 0.0   | 0012-0 |
| 4701.00 | bulk      | 100.3 | 47.8  | 266.9 | 75.7  | 183.6 | 0.0   | 406.3 | 818.4 | 114.8 | 0023-0 |

# GEOCHEMICAL DATA REPORT

## GEOLAB NOR AS

PO Box 5740 Fossegrenda  
N-7002 Trondheim  
Norway

Tel: (47) 73 964000  
Fax: (47) 73 968728  
Tlx: 65706 geono n

Internet: firmapost@geolab-  
nor.telemax no  
X.400: S=firmapost, O=geolab-  
nor, A=telemax, C=no

CLIENT:

## STATOIL

REF(S)

Ger van Graas  
ORDER NO: G96-18  
CONTRACT NO: DTJ 020215

TITLE

## NOCS 25/10-6S WELL STUDY

AUTHOR(S)

Peter Barry Hall

GEOLAB PROJECT NO.

62318

DATE

15.04.97

PROJECT MANAGER

Peter Barry Hall, Snr. Scientist

QA RESPONSIBLE

Kjell Arne Bakken, Snr. Scientist

REPORT NO/FILE

PAGE

1 of 1

# CONTENTS

## COMMENTS

### PART 1 - ROCK SAMPLES

#### TABLES

1. Analytical Program
3. Lithology Description
4. Vitrinite Reflectance (IFE)
- 5a-b. TOC and Rock-Eval
6. Pyrolysis GC
7. Visual Kerogen Description and SCI
- 8a-d. Bulk Solvent Extract Composition (MPLC)
- 8e-f. Bulk Solvent Extract Composition (Iatroscan)
- 9a-Bb. Saturated and Aromatic Hydrocarbon GC
- 10a-b. Carbon Isotope Data for C<sub>15</sub>+ Fractions and Kerogen Concentrates
- 11a-i. Gas Chromatography - Mass Spectrometry, Saturated Hydrocarbons
- 12a-e. Gas Chromatography - Mass Spectrometry, Aromatic Hydrocarbons

#### APPENDICES

##### APPENDIX 1:

- I. Thermal Extract Chromatograms and Pyrograms
- II. Saturated Hydrocarbon Gas Chromatograms
- III. Aromatic Hydrocarbons Gas Chromatograms (FID and FPD)

##### APPENDIX 2:

- I. GC-MS Saturated Hydrocarbon Fragmentograms
- II. GC-MS Aromatic Hydrocarbon Fragmentograms

##### APPENDIX 3: IFE REPORT:

- I. Vitrinite Reflectance

# CONTENTS

## PART 2 - MUD SAMPLE

### TABLES

- 1. Analytical Program (see Part 1 analytical program)
- 8a-d. Bulk Solvent Extract Composition (MPLC)
- 8e-f. Bulk Solvent Extract Composition (Iatroscan)
- 9a-c. Saturated and Aromatic Hydrocarbon GC
- 10a-b. Carbon Isotope Data for C<sub>15+</sub> Fractions
- 11a-i. Gas Chromatography - Mass Spectrometry, Saturated Hydrocarbons
- 12a-e. Gas Chromatography - Mass Spectrometry, Aromatic Hydrocarbons

### APPENDICES

#### APPENDIX 1:

- I. Iatroscan of Mud
- II. Saturated Hydrocarbon Gas Chromatogram
- III. Aromatic Hydrocarbons Gas Chromatograms (FID and FPD)

#### APPENDIX 2:

- I. GC-MS Saturated Hydrocarbon Fragmentograms
- II. GC-MS Aromatic Hydrocarbon Fragmentograms

## COMMENTS

Analytical Procedures are as in the Norwegian Industry Guide to Organic Geochemical Analyses.

### Sample Problems:

1. Heavily stained with oil-based mud, causing problems in saturated and aromatic GC
2. Mud latroscan saturate and aromatic fractions are impossible to separate (see chromatogram). Hence there is an apparent contradiction in the amounts of saturates and aromatics between MPLC and latroscan. The MPLC data is taken to be correct.



**Institutt for energiteknikk**  
Institute for Energy Technology

|  |   |   |  |  |
|--|---|---|--|--|
| <b>ADDRESS</b> KJELLER<br>Box 40, N-2007 Kjeller, Norway<br><b>TELEPHONE</b> +47 63 806000<br><b>TELEX</b> 76 361 isotp n<br><b>TELEFAX</b> +47 63 815553  |   | <b>HALDEN</b><br>N-1751 Halden, Norway<br>+47 69 183100<br>76 335 energ n |  | <b>AVAILABILITY</b><br><br>In Confidence |
| <b>REPORT TYPE</b>   | <b>REPORT NO.</b><br>IFE/KR/F-96/234  |   | <b>DATE</b><br>1997-01-02  |  |
|  | <b>REPORT TITLE</b><br><br>VITRINITE REFLECTANCE WELL 25/10-6S<br>OFFSHORE NORWAY<br>(ref. IFE no. 2 3.0078.96) |   | <b>DATE OF LAST REV.</b>   |  |
|  |   |   | <b>REV. NO.</b>  |  |
|  | <b>CLIENT</b><br>Geolab Nor/Statoil   |   | <b>NUMBER OF PAGES</b>   |  |
| <b>CLIENT REF.</b><br>G96-18   |   | <b>NUMBER OF ISSUES</b><br>16   |  |  |
| <b>SUMMARY</b><br><br>Standard vitrinite reflectance analysis is performed on 33 samples.<br><br>The work is done in accordance with the "The Norwegian Industry Guide to Organic Geochemical Analyses", Third Edition 1993. |   |   | <b>DISTRIBUTION</b><br><br>Geolab Nor/Statoil (10)<br>Bjørnstad, T.<br>Johansen, H.<br>Throndsen, T.<br>Aasgaard, K.<br>File (2) |  |
| <b>KEYWORDS</b>  |   |   |  |  |
|  | <b>NAME</b>   | <b>DATE</b>   | <b>SIGNATURE</b>   |  |
| <b>PREPARED BY</b>   | Torbjørn Throndsen  | 1997-01-02  |  |  |
| <b>REVIEWED BY</b>   | Harald Johansen   | 1997-01-02  |  |  |
| <b>APPROVED BY</b>   | Tor Bjørnstad   | 1997-01-02  |  |  |

## **1 Introduction**

This report gives the results of vitrinite reflectance analysis of 33 cuttings covering the interval from 1290 to 4692 mRKB (mMD) in well 25/10-6S offshore Norway.

## **2 Material**

### **2.1 Sample material**

The material was provided as unwashed cuttings.

### **2.2 Geological information and casing points**

Stratigraphic information was provided (included in Table 1). This proved helpful in defining a vitrinite reflectance versus depth trend. No information on casing points was available.

## **3 Analytical techniques**

### **3.1 Preparation**

The samples were treated with hydrochloric acid prior to further preparation. The aim was to avoid soft and expanding mineral phases in order to ensure good polishing quality and to concentrate the organic material.

### **3.2 Analysis**

The analytical equipment being used was a Zeiss MPM 03 photometer microscope equipped with an Epiplan-Neofluoar 40/0.90 oil objective. The sensitive measuring spot was kept constant for all the measurements at about 2.5 micron in diameter. The measurements were made through a green band pass filter (546 nm) and in oil immersion (refractive index 1.515 at 18 °C). The readings were made without a polariser and using a stationary stage. This procedure is called measurement of random reflectance (%Rm). The



photometer was calibrated daily against a standard of known reflectance ( $\%R_m=0.588$ ) and routinely checked against two other standards of significantly different reflectances ( $\%R_m=0.879$  and  $1.696$ ). A deviation from these values of less than  $\pm 0.01 \%$   $R_m$  and  $\pm 0.02 \%$   $R_m$  respectively is considered as acceptable. The calibration is routinely checked during the course of measuring, at least every hour. A deviation of less than  $\pm 0.005 \%$   $R_m$  is considered as acceptable.

For each sample up to 20 points were measured if possible, sometimes more, and quality ratings are given to various aspects which may affect the measurements. The aspects are: abundance of vitrinite, uncertainties in the identification of indigenous vitrinite, type of vitrinite, particle size, particle surface quality and abundance of pyrite.

### **3.3 Presentation of results**

The raw data for the measurements are presented in the appendix for each sample both as tabulated data and histograms. A true vitrinite population is selected among the readings based on observations made while measuring, and an arithmetic mean value and standard deviation are calculated for this and eventual other populations. A quality rating is given to the interpreted true population. The results are listed in Table 1.

The results are presented as vitrinite reflectance versus depth plots on linear and semilogarithmic scales (Figure 1). A vitrinite reflectance versus depth trend is interpreted on linear and semilogarithmic scales. The interpreted trend is also listed in Table 2.

Table 1 Vitrinite reflectance data

Well  
25/10-6S

| IFE no. | Depth<br>mRKB<br>(mMD) | Sample<br>type | Lithology | %Rm  | Std.<br>Dev. | N  | Quality | Preparation |
|---------|------------------------|----------------|-----------|------|--------------|----|---------|-------------|
| 961337  | 1290.0                 | cut            | clst      | 0.24 | 0.04         | 20 | M       | HF          |
| 961338  | 1400.0                 | cut            | clst      | 0.23 | 0.03         | 20 | M       | HF          |
| 961339  | 1510.0                 | cut            | clst      | 0.29 | 0.04         | 21 | M       | HF          |
| 961340  | 1610.0                 | cut            | clst      | 0.28 | 0.04         | 17 | M       | HF          |
| 961341  | 1730.0                 | cut            | clst      | 0.30 | 0.04         | 19 | M       | HF          |
| 961342  | 1850.0                 | cut            | clst      | 0.33 | 0.03         | 19 | M       | HF          |
| 961343  | 1960.0                 | cut            | clst      | 0.34 | 0.05         | 20 | M       | HF          |
| 961344  | 2060.0                 | cut            | clst      | 0.39 | 0.05         | 21 | M       | HF          |
| 961345  | 2160.0                 | cut            | clst      | 0.36 | 0.07         | 18 | M       | HF          |
| 961346  | 2244.0                 | cut            | clst      | 0.39 | 0.08         | 13 | M       | HF          |
| 961347  | 2301.0                 | cut            | clst      | 0.39 | 0.07         | 17 | M       | HF          |
| 961348  | 2421.0                 | cut            | sst/sst   | 0.52 | 0.04         | 6  | P       | HF          |
| 961349  | 2517.0                 | cut            | sst/sst   | 0.45 | 0.04         | 4  | P       | HF          |
| 961350  | 2625.0                 | cut            | sst/sst   | 0.51 | -            | 1  | P       | HF          |
| 961351  | 2760.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961352  | 2860.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961353  | 2970.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961354  | 3080.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961355  | 3130.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961356  | 3530.0                 | cut            | sst/sst   | -    | -            | -  | Barren  | HF          |
| 961357  | 3670.0                 | cut            | sst/sst   | 1.32 | 0.18         | 5  | X       | HF          |
| 961358  | 3780.0                 | cut            | sst/clst  | 1.39 | 0.37         | 7  | X       | HF          |
| 961359  | 3880.0                 | cut            | clst      | 0.64 | 0.04         | 4  | P       | HF          |
| 961360  | 3980.0                 | cut            | clst/sst  | 0.81 | -            | 1  | P       | HF          |
| 961361  | 4092.0                 | cut            | clst/sst  | 0.76 | 0.04         | 2  | P       | HF          |
| 961362  | 4176.0                 | cut            | clst/sst  | 1.49 | 0.23         | 16 | X       | HF          |
| 961363  | 4245.0                 | cut            | clst      | 0.76 | 0.06         | 17 | P       | HF          |
| 961364  | 4299.0                 | cut            | clst      | 0.52 | 0.05         | 8  | P       | HF          |
| 961365  | 4332.0                 | cut            | clst      | 0.88 | 0.10         | 10 | P       | HF          |
| 961366  | 4416.0                 | cut            | clst      | 0.89 | 0.08         | 13 | M       | HF          |
| 961367  | 4512.0                 | cut            | clst      | 0.97 | 0.13         | 17 | P       | HF          |
| 961368  | 4593.0                 | cut            | clst      | 1.04 | 0.11         | 19 | P       | HF          |
| 961369  | 4692.0                 | cut            | coal/cm   | 1.03 | 0.05         | 30 | G       | HF          |

| Legend   |                  |               |                     |             |               |
|----------|------------------|---------------|---------------------|-------------|---------------|
| <b>G</b> | Good quality     | <b>st</b>     | Staining            | <b>sst</b>  | sandstone     |
| <b>M</b> | Moderate quality | <b>Barren</b> | Barren of vitrinite | <b>sist</b> | siltstone     |
| <b>P</b> | Poor quality     | <b>HF</b>     | HF-treated          | <b>clst</b> | claystone     |
| <b>X</b> | Not vitrinite    | <b>Bulk</b>   | Bulk rock           | <b>cm</b>   | carbominerite |
| <b>A</b> | Mud additive     |               |                     | <b>lst</b>  | limestone     |

# CONTENTS

## PART 2 - MUD SAMPLE

### TABLES

1. Analytical Program
- 8a-d. Bulk Solvent Extract Composition (MPLC)
- 8e-f. Bulk Solvent Extract Composition (Iatroscan)
- 9a-b. Saturated and Aromatic Hydrocarbon GC
- 10a-b. Carbon Isotope Data for C<sub>15</sub>+ Fractions
- 11a-i. Gas Chromatography - Mass Spectrometry, Saturated Hydrocarbons
- 12a-e. Gas Chromatography - Mass Spectrometry, Aromatic Hydrocarbons

### APPENDICES

#### APPENDIX 1:

- I. Iatroscan of Mud
- II. Saturated Hydrocarbon Gas Chromatogram
- III. Aromatic Hydrocarbons Gas Chromatograms (FID and FPD)

#### APPENDIX 2:

- I. GC-MS Saturated Hydrocarbon Fragmentograms
- II. GC-MS Aromatic Hydrocarbon Fragmentograms

TABLE 1 ANALYTICAL PROGRAM

| Sample Depth<br>(metres) and<br>Type | Fractions        | HS & Occ Gas | Leco TOC | RockEval | Therm Ext GC | Pyrolysis GC | Extraction | MPLC & Deasp | Iatroscan | EOM GC | Sat GC Quant. | Aro GC | Sat GCMS Quant. | Aro GCMS | Bulk C Isot | Vis Kerogen | Vit Reflect |
|--------------------------------------|------------------|--------------|----------|----------|--------------|--------------|------------|--------------|-----------|--------|---------------|--------|-----------------|----------|-------------|-------------|-------------|
|                                      |                  |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 1050.00cS                            | IFE not received |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 1170.00cS                            | IFE not received |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 1290.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1400.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1510.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1610.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1730.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1850.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 1960.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2060.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2160.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2244.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2301.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2421.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2517.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2625.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2760.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2860.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 2970.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3080.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3130.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3530.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3370.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3780.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3880.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 3980.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 4092.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 4176.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 4245.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |
| 4248.00cS                            | O30/0013-0       | x            | x        |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 4260.00cS                            | O30/0014-0       | x            | x        |          | x            | x            | x          | x            |           | x      | x             | x      | x               | x        | x           |             |             |
| 4272.00cS                            | O30/0015-0       | x            | x        |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 4284.00cS                            | O30/0016-0       | x            | x        |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 4296.00cS                            | O30/0017-0       | x            | x        |          |              |              |            |              |           |        |               |        |                 |          |             |             |             |
| 4299.00cS                            | IFE              |              |          |          |              |              |            |              |           |        |               |        |                 |          |             |             | x           |

TABLE 1 ANALYTICAL PROGRAM

| Sample Depth<br>(metres) and<br>Type | Fractions    | HS & Occ Gas | Leco TOC               | RockEval | Therm Ext GC     | Pyrolysis GC | Extraction | MPLC & Deasp | Infrared | EOM GC | Sat GC Quant. | Aro GC | Sat GCMS Quant. | Aro GCMS | Bulk C Isot | Vis Kerogen | Vit Reflect |
|--------------------------------------|--------------|--------------|------------------------|----------|------------------|--------------|------------|--------------|----------|--------|---------------|--------|-----------------|----------|-------------|-------------|-------------|
|                                      |              |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4305.00cS                            | O30/0018-0   |              | x                      | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4314.00cS                            | O30/0019-0   |              | x                      | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           | x           |             |
| 4320.00cS                            | O30/0020-0   |              | x                      | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4329.00cS                            | O30/0021-0   |              | x                      | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4332.00cS                            | IFE          |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             | x           |
| 4335.00cS                            | O30/0022-0   |              | x                      | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           | x           |             |
| 4339.50pR                            | O30/0001-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4340.50pR                            | O30/0002-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4341.87pR                            | O30/0003-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4343.00pR                            | O30/0004-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4344.50pR                            | O30/0005-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4345.63pR                            | O30/0006-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4346.70pR                            | O30/0007-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4349.90pR                            | O30/0008-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4349.88pR                            | O30/0009-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4397.16pR                            | O30/0010-0   |              |                        | x        |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4398.63pR                            | O30/0011-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4399.40pR                            | O30/0012-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4416.00cS                            | IFE          |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             | x           |
| 4512.00cS                            | IFE          |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             | x           |
| 4593.00cS                            | IFE          |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             | x           |
| 4692.00cS                            | IFE          |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             | x           |
| 4701.00cR                            | O30/0023-0   |              |                        | x        |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| 4704.00cR                            | O30/0024-0   |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| 4706.00cR                            | not received |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| slam 4668                            | O31/0001-0   |              |                        |          |                  | x            | x          | x            |          |        | x             | x      | x               | x        | x           |             |             |
| Totals / Sign.                       |              |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| NOTES                                |              |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| CUTTINGS FROM 1039-2377M             |              |              | Anco 2000              |          | with 3-5% glycol |              |            |              |          |        |               |        |                 |          |             |             |             |
| CUTTINGS FROM 2377-4706M             |              |              | Ancovert oil based mud |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| Saturated GC                         | Quantitative |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |
| Saturated GCMS                       | Quantitative |              |                        |          |                  |              |            |              |          |        |               |        |                 |          |             |             |             |

Table 8 a: MPLC Bulk Composition: Weight of EOM and Fraction for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | Extracted<br>(g) | EOM<br>(mg) | Sat<br>(mg) | Aro<br>(mg) | Asph<br>(mg) | NSO<br>(mg) | HC<br>(mg) | Non-HC<br>(mg) | TOC (e)<br>(%) | Sample  |
|---------|-----|-----------|------------------|-------------|-------------|-------------|--------------|-------------|------------|----------------|----------------|---------|
| 4668.00 | mud | bulk      | 150.0            | 1793.0      | 1680.4      | 38.9        | 10.2         | 63.5        | 1719.3     | 73.7           | -              | 0001-0B |

Table 8 b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well 25/10-6S MJD

Depth unit of measure: m

| Depth   | Typ | Lithology | EOM   | Sat   | Aro | Asph | NSO | HC    | Non-HC | Sample  |
|---------|-----|-----------|-------|-------|-----|------|-----|-------|--------|---------|
| 4668.00 | mud | bulk      | 11953 | 11202 | 259 | 68   | 423 | 11461 | 491    | 0001-0B |

Table 8 c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | EOM | Sat | Aro | Asph | NSO | HC | Non-HC | Sample  |
|---------|-----|-----------|-----|-----|-----|------|-----|----|--------|---------|
| 4668.00 | mud | bulk      | -   | -   | -   | -    | -   | -  | -      | 0001-0B |



Table 8 d: MPLC Bulk Composition: Material extracted from the rock (%) for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | Sat   | Aro  | Asph | NSO  | HC    | Non-HC | Sat     | HC      | Sample  |
|---------|-----|-----------|-------|------|------|------|-------|--------|---------|---------|---------|
|         |     |           | EOM   | EOM  | EOM  | EOM  | EOM   | EOM    | Aro     | Non-HC  |         |
| 4668.00 | mud | bulk      | 93.72 | 2.17 | 0.57 | 3.54 | 95.89 | 4.11   | 4322.04 | 2332.51 | 0001-0B |

Table 8e: Iatroscan TLC Bulk Composition: Absolute yields in mg/g rock for well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Typ</u> | <u>Lithology</u> | <u>EOM<br/>weighed</u> | <u>Sat HC</u> | <u>Aro HC</u> | <u>Resins</u> | <u>Asp</u> | <u>Tot HC</u> | <u>Tot Pol</u> | <u>EOM<br/>calcul.</u> | <u>Sample</u> |
|--------------|------------|------------------|------------------------|---------------|---------------|---------------|------------|---------------|----------------|------------------------|---------------|
| 4668.00      | mud        | bulk             | 11.95                  | 3.16          | 2.20          | 0.33          | 0.07       | 5.36          | 0.40           | 5.75                   | 0001-0B       |

Table 8f: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Typ</u> | <u>Lithology</u> | <u>Sat HC</u> | <u>Aro HC</u> | <u>Resins</u> | <u>Asp</u> | <u>Tot HC</u> | <u>Tot Pol</u> | <u>Sample</u> |
|--------------|------------|------------------|---------------|---------------|---------------|------------|---------------|----------------|---------------|
| 4668.00      | mud        | bulk             | 55.19         | 38.46         | 5.78          | 0.57       | 93.65         | 6.35           | 0001-0B       |

Table 9A: Quantitative Analysis of Saturated Fraction for well 25/10-6S MUD

| sample       | nC15<br>mg/g<br>sat | nC16<br>mg/g<br>sat | iC18<br>mg/g<br>sat | nC17<br>mg/g<br>sat | Pr<br>mg/g<br>sat | nC18<br>mg/g<br>sat | Ph<br>mg/g<br>sat | nC19<br>mg/g<br>sat | nC20<br>mg/g<br>sat | nC21<br>mg/g<br>sat | nC22<br>mg/g<br>sat | nC23<br>mg/g<br>sat | nC24<br>mg/g<br>sat | nC25<br>mg/g<br>sat | nC26<br>mg/g<br>sat | nC27<br>mg/g<br>sat | nC28<br>mg/g<br>sat | nC29<br>mg/g<br>sat | nC30<br>mg/g<br>sat | nC31<br>mg/g<br>sat | nC32<br>mg/g<br>sat | nC33<br>mg/g<br>sat | nC34<br>mg/g<br>sat |
|--------------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 4668.00m MUD | 11.44               | 10.55               | 0.00                | 9.44                | 0.00              | 7.71                | 0.00              | 4.99                | 2.86                | 1.64                | 0.98                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                |

Table 9B: Saturated Hydrocarbon Ratios (peak area) for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | <u>Pristane</u> | <u>Pristane</u> | <u>Pristane/nC17</u> | <u>Phytane</u> | CPI1 | <u>nC17</u>      | Sample  |
|---------|-----|-----------|-----------------|-----------------|----------------------|----------------|------|------------------|---------|
|         |     |           | <u>nC17</u>     | <u>Phytane</u>  | <u>Phytane/nC18</u>  | <u>nC18</u>    |      | <u>nC17+nC27</u> |         |
| 4668.00 | mud | bulk      | -               | -               | -                    | -              | -    | 1.00             | 0001-0B |

Table 9Ca: Aromatic Hydrocarbon Ratios (peak area) for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | MNR  | DMNR | BPhR | 2/1MP | MPI1 | MPI2 | Rc | DBT/P | 4/1MDBT | (3+2)<br>/1MDBT | Sample  |
|---------|-----|-----------|------|------|------|-------|------|------|----|-------|---------|-----------------|---------|
| 4668.00 | mud | bulk      | 6.65 | 0.77 | 0.48 | -     | -    | -    | -  | -     | -       | -               | 0001-0B |

Table 9Cb: Aromatic Hydrocarbon Ratios (peak area) for well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Typ</u> | <u>Lithology</u> | <u>F1</u> | <u>F2</u> | <u>Sample</u> |
|--------------|------------|------------------|-----------|-----------|---------------|
| 4668.00      | mud        | bulk             | -         | -         | 0001-0B       |

Table 10A: Tabulation of carbon isotope data for EOM/EOM - fractions for well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Typ</u> | <u>Lithology</u> | <u>EOM</u> | <u>Saturated</u> | <u>Aromatic</u> | <u>NSO</u> | <u>Asphaltenes</u> | <u>Kerogen</u> | <u>Sample</u> |
|--------------|------------|------------------|------------|------------------|-----------------|------------|--------------------|----------------|---------------|
| 4668.00      | mud        | bulk             | -          | -27.29           | -27.04          | -27.14     | -26.79             | -              | 0001-0        |



Table 10B: Tabulation of cv values from carbon isotope data for well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Typ</u> | <u>Lithology</u> | <u>Saturated</u> | <u>Aromatic</u> | <u>cv value</u> | <u>Sample</u> |
|--------------|------------|------------------|------------------|-----------------|-----------------|---------------|
| 4668.00      | mud        | bulk             | -27.29           | -27.04          | -2.64           | 0001-0        |

Table 11a: Variation in Triterpane Distribution (peak height) SIR for Well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Lithology | Ratio1 | Ratio2 | Ratio3 | Ratio4 | Ratio5 | Ratio6 | Ratio7 | Ratio8 | Ratio9 | Rat.10 | Rat.11 | Rat.12 | Rat.13 | Rat.14 | Sample |
|---------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 4668.00 | bulk      | -      | -      | -      | 0.66   | 0.40   | -      | -      | -      | -      | 1.31   | 1.00   | 0.40   | -      | -      | 0001-0 |

List of Triterpane Distribution Ratios

---

Ratio 1:  $27Tm / 27Ts$

Ratio 2:  $27Tm / 27Tm+27Ts$

Ratio 3:  $27Tm / 27Tm+30a\beta+30\beta a$

Ratio 4:  $29a\beta / 30a\beta$

Ratio 5:  $29a\beta / 29a\beta+30a\beta$

Ratio 6:  $30d / 30a\beta$

Ratio 7:  $28a\beta / 30a\beta$

Ratio 8:  $28a\beta / 29a\beta$

Ratio 9:  $28a\beta / 28a\beta+30a\beta$

Ratio 10:  $24/3 / 30a\beta$

Ratio 11:  $30a\beta / 30a\beta+30\beta a$

Ratio 12:  $29a\beta+29\beta a / 29a\beta+29\beta a+30a\beta+30\beta a$

Ratio 13:  $29\beta a+30\beta a / 29a\beta+30a\beta$

Ratio 14:  $32a\beta S / 32a\beta S+32a\beta R$  (%)

Table 11b: Variation in Sterane Distribution (peak height) SIR for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Ratio5</u> | <u>Ratio6</u> | <u>Ratio7</u> | <u>Ratio8</u> | <u>Ratio9</u> | <u>Ratio10</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| 4668.00      | bulk             | 0.16          | -             | 82.60         | 1.80          | 1.00          | 0.77          | 0.65          | 0.70          | -             | 2.37           | 0001-0        |

List of Sterane Distribution Ratios

---

Ratio 1:  $27d\beta S / 27d\beta S + 27aaR$

Ratio 2:  $29aaS / 29aaS + 29aaR$  (%)

Ratio 3:  $2 * (29\beta\beta R + 29\beta\beta S) / (29aaS + 29aaR + 2 * (29\beta\beta R + 29\beta\beta S))$  (%)

Ratio 4:  $27d\beta S + 27d\beta R + 27daR + 27daS / 29d\beta S + 29d\beta R + 29daR + 29daS$

Ratio 5:  $29\beta\beta R + 29\beta\beta S / 29\beta\beta R + 29\beta\beta S + 29aaS$

Ratio 6:  $21a + 22a / 21a + 22a + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 7:  $21a + 22a / 21a + 22a + 28daS + 28aaS + 29daR + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 8:  $29\beta\beta R + 29\beta\beta S / 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 9:  $29aaS / 29aaR$

Ratio 10:  $29\beta\beta R + 29\beta\beta S / 29aaR$

Table 11c: Raw triterpane data (peak height) m/z 191 SIR for Well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Lithology | 23/3  | 24/3  | 25/3  | 24/4  | 26/3  | 27Ts  | 27Tm  | 28aβ  | 25nor30aβ | Sample |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|--------|
|         |           | 29aβ  | 29Ts  | 30d   | 29βa  | 300   | 30aβ  | 30βa  | 30G   | 31aβS     |        |
|         |           | 31aβR | 32aβS | 32aβR | 33aβS | 33aβR | 34aβS | 34aβR | 35aβS | 35aβR     |        |
| 4668.00 | bulk      | 123.0 | 31.2  | 18.1  | 19.8  | 10.2  | 10.4  | 0.0   | 0.0   | 0.0       | 0001-0 |
|         |           | 15.7  | 0.0   | 0.0   | 0.0   | 0.0   | 23.8  | 0.0   | 0.0   | 10.7      |        |
|         |           | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0       |        |

Depth unit of measure: m

| Depth   | Lithology | 21a    | 22a    | 27dBS | 27dBR | 27daR | 27daS | 28dBS  | 28dBR | 28daR* | Sample |
|---------|-----------|--------|--------|-------|-------|-------|-------|--------|-------|--------|--------|
|         |           | 29dBS* | 28daS* | 27aaR | 29dBR | 29daR | 28aaS | 29daS* | 28BS  |        |        |
|         |           | 28aaR  | 29aaS  | 29BSR | 29BS  | 29aaR |       |        |       |        |        |
| 4668.00 | bulk      | 38.8   | 12.4   | 24.2  | 0.0   | 5.8   | 5.4   | 7.0    | 4.0   | 68.2   | 0001-0 |
|         |           | 0.0    | 9.2    | 4.7   | 125.5 | 6.2   | 0.0   | 3.5    | 4.2   | 5.0    |        |
|         |           |        | 0.0    | 5.9   | 5.0   | 4.6   |       |        |       |        |        |

\* 28daR coel with 27aaS, 29dBS coel with 27BSR, 28daS coel with 27BS, 29daS coel with 28BSR

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Lithology | 27 $\beta$ BR | 27 $\beta$ BS | 28 $\beta$ BR | 28 $\beta$ BS | 29 $\beta$ BR | 29 $\beta$ BS | 30 $\beta$ BR | 30 $\beta$ BS | Sample |
|---------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| 4668.00 | bulk      | 8.9           | 6.4           | 6.6           | 6.7           | 4.6           | 5.3           | 0.0           | 0.0           | 0001-0 |



Table 11f: Raw triterpane data (peak height) m/z 177 SIR for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>25nor28aß</u> | <u>25nor30aß</u> | <u>Sample</u> |
|--------------|------------------|------------------|------------------|---------------|
| 4668.00      | bulk             | 0.0              | 0.0              | 0001-0        |

Table 11g: Amount of triterpanes (ppb) m/z 191 SIR for Well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Lithology | 23/3   | 24/3   | 25/3  | 24/4  | 26/3  | 27Ts   | 27Tm  | 28aß  | 25nor30aß | Sample |
|---------|-----------|--------|--------|-------|-------|-------|--------|-------|-------|-----------|--------|
|         |           | 29aß   | 29Ts   | 30d   | 29ßa  | 300   | 30aß   | 30ßa  | 30G   | 31aßS     |        |
|         |           | 31aßR  | 32aßS  | 32aßR | 33aßS | 33aßR | 34aßS  | 34aßR | 35aßS | 35aßR     |        |
| 4668.00 | bulk      | 5238.4 | 1328.4 | 771.6 | 843.4 | 434.4 | 441.8  | 0.0   | 0.0   | 0.0       | 0001-0 |
|         |           | 667.9  | 0.0    | 0.0   | 0.0   | 0.0   | 1011.9 | 0.0   | 0.0   | 456.3     |        |
|         |           | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0       |        |

Depth unit of measure: m

| Depth   | Lithology | 21a    | 22a    | 27dBS  | 27dBR | 27daR | 27daS | 28dBS  | 28dBR | 28daR* | Sample |
|---------|-----------|--------|--------|--------|-------|-------|-------|--------|-------|--------|--------|
|         |           | 29dBS* | 28daS* | 27aaR  | 29dBR | 29daR | 28aaS | 29daS* | 28BS  |        |        |
|         |           | 28aaR  | 29aaS  | 29BSR  | 29BS  | 29aaR |       |        |       |        |        |
| 4668.00 | bulk      | 1654.7 | 527.5  | 1030.7 | 0.0   | 245.3 | 230.8 | 296.7  | 169.5 | 2903.7 | 0001-0 |
|         |           | 392.9  | 200.6  | 5346.8 | 263.1 | 0.0   | 149.0 | 180.8  | 214.6 |        |        |
|         |           | 0.0    | 0.0    | 252.5  | 211.5 | 195.4 |       |        |       |        |        |

\* 28daR coel with 27aaS, 29dBS coel with 27BSR, 28daS coel with 27BS, 29daS coel with 28BS

Table 11i: Amount of standard and weight of sample for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Standard</u> | <u>Amount</u> | <u>Weight</u> | <u>Sample</u> |
|--------------|------------------|-----------------|---------------|---------------|---------------|
| 4668.00      | bulk             | 803.4           | 1.400         | 40.9          | 0001-0        |

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Ratio5</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 4668.00      | bulk             | 0.88          | 0.82          | 0.62          | 0.67          | 0.73          | 0001-0        |

Ratio1:  $a1 / a1 + g1$

Ratio2:  $b1 / b1 + g1$

Ratio3:  $a1 + b1 / a1 + b1 + c1 + d1 + e1 + f1 + g1$

Ratio4:  $a1 / a1 + e1 + f1 + g1$

Ratio5:  $a1 / a1 + d1$

Table 12b: Variation in Monoaromatic Sterane Distribution (peak height) for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Ratio3</u> | <u>Ratio4</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|
| 4668.00      | bulk             | 1.00          | 1.00          | 1.00          | 1.00          | 0001-0        |

Ratio1: A1 / A1 + E1  
 Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1  
 Ratio4: A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1

Table 12c: Aromatisation of Steranes (peak height) for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Ratio1</u> | <u>Ratio2</u> | <u>Sample</u> |
|--------------|------------------|---------------|---------------|---------------|
| 4668.00      | bulk             | -             | 1.00          | 0001-0        |

$$\text{Ratio1: } \frac{C1+D1+E1+F1+G1+H1+I1}{C1+D1+E1+F1+G1+H1+I1 + c1+d1+e1+f1+g1}$$

$$\text{Ratio2: } g1 / g1 + I1$$

Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for Well 25/10-6S MUD

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>a1</u> | <u>b1</u> | <u>c1</u> | <u>d1</u> | <u>e1</u> | <u>f1</u> | <u>g1</u> | <u>Sample</u> |
|--------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| 4668.00      | bulk             | 456.8     | 274.4     | 61.5      | 166.1     | 85.2      | 76.0      | 61.0      | 0001-0        |



Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for Well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Lithology | A1    | B1    | C1  | D1  | E1  | F1  | G1  | H1  | I1  | Sample |
|---------|-----------|-------|-------|-----|-----|-----|-----|-----|-----|-----|--------|
| 4668.00 | bulk      | 368.6 | 115.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0001-0 |

Table 8 a: MPLC Bulk Composition: Weight of EOM and Fraction for well 25/10-6S MUD

Depth unit of measure: m

| Depth   | Typ | Lithology | Rock<br>Extracted<br>(g) | EOM<br>(mg) | Sat<br>(mg) | Aro<br>(mg) | Asph<br>(mg) | NSO<br>(mg) | HC<br>(mg) | Non-HC<br>(mg) | TOC (e)<br>(%) | Sample  |
|---------|-----|-----------|--------------------------|-------------|-------------|-------------|--------------|-------------|------------|----------------|----------------|---------|
| 4668.00 | mud | bulk      | -                        | 423.0       | 389.0       | 9.0         | 10.3         | 14.7        | 398.0      | 25.0           | -              | 0001-0B |