

Table 7: Visual Kerogen Composition Data for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology | Amorphous |    |    | Algal/Phytoplankton |    |    |    |    | Herbaceous |     |    |    | Woody |     |    |    | Coaly |     |    | SCI | Sample |    |    |                 |             |         |
|---------|-----|-----------|-----------|----|----|---------------------|----|----|----|----|------------|-----|----|----|-------|-----|----|----|-------|-----|----|-----|--------|----|----|-----------------|-------------|---------|
|         |     |           | AM%       | FA | HA | AP%                 | Cy | Ta | Bo | Di | De         | HE% | SP | Cu | De    | WO% | FL | NF | De    | CO% | FS |     |        | De |    |                 |             |         |
| 2147.00 | cut | bulk      | 5         | *  |    | TR                  | ?  |    |    |    |            |     |    | 5  | *     | **  | *  |    |       |     | 85 | **  | *      | 5  | *  | 5.0(?)          | 0072-0B     |         |
| 2182.00 | swc | Sh/Clst   | 85        | *  |    | TR                  | ?  |    |    |    |            |     |    | 10 | *     | ?   | ** |    |       |     | TR |     | *      | 5  | *  | NDP/5.0-5.5(??) | 0023-1L     |         |
| 2215.00 | cut | bulk      | 70        | *  | ** |                     | TR | *  |    |    |            |     |    | 20 | *     | *   | ** |    |       |     | TR |     | *      | ** | 10 | *               | 5.5-6.0 (?) | 0073-0B |

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 6608/11-2

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  |
|---------|-----|----------------------------------|--------------------------|-------------|-------------|-------------|--------------|-------------|------------|----------------|----------------|---------|
| 1614.00 | swc | Sh/Clst: dsk y brn               | 9.1                      | 22.9        | 0.4         | 0.4         | 1.8          | 20.3        | 0.9        | 22.0           | 1.59           | 0006-1L |
| 1643.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 1.4                      | 21.5        | 0.2         | 0.5         | 1.2          | 19.6        | 0.7        | 20.8           | 3.08           | 0039-1L |
| 1682.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 0.7                      | 8.0         | 0.5         | 0.3         | 0.9          | 6.3         | 0.8        | 7.2            | 3.15           | 0047-1L |
| 1700.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 1.0                      | 9.2         | 0.2         | 0.2         | 1.0          | 7.8         | 0.4        | 8.8            | 1.72           | 0049-1L |
| 1731.00 | swc | Sh/Clst: blk                     | 9.1                      | 99.0        | 3.3         | 4.8         | 11.9         | 78.9        | 8.1        | 90.9           | 23.60          | 0013-1L |
| 1742.10 | ccp | S/Sst : drk y brn                | 10.3                     | 801.8       | 338.0       | 328.7       | 8.5          | 126.6       | 666.7      | 135.1          | 5.82           | 0025-1L |
| 1742.50 | ccp | Sh/Clst: brn blk                 | 9.4                      | 206.6       | 47.9        | 51.9        | 10.3         | 96.6        | 99.7       | 106.9          | 4.21           | 0026-1L |
| 1744.25 | ccp | S/Sst : m y brn to pl y brn      | 9.3                      | 1024.9      | 434.2       | 390.1       | 8.7          | 191.9       | 824.3      | 200.6          | 5.86           | 0027-1L |
| 1748.77 | ccp | S/Sst : m y brn                  | 8.8                      | 1010.2      | 425.9       | 385.7       | 8.9          | 189.7       | 811.7      | 198.5          | 4.52           | 0028-1L |
| 1751.57 | ccp | S/Sst : m y brn                  | 7.5                      | 710.0       | 295.6       | 257.6       | 7.5          | 149.2       | 553.3      | 156.7          | 4.76           | 0029-1L |
| 1754.49 | ccp | S/Sst : m y brn                  | 8.9                      | 905.1       | 376.8       | 334.6       | 12.9         | 180.9       | 711.4      | 193.7          | 5.53           | 0030-1L |
| 1757.37 | ccp | S/Sst : m y brn                  | 8.4                      | 1076.9      | 429.1       | 436.4       | 7.9          | 203.5       | 865.5      | 211.4          | 6.08           | 0031-1L |
| 1759.00 | ccp | bulk                             | 22.3                     | 1472.7      | -           | -           | -            | -           | -          | -              | -              | 0076-0B |
| 1759.95 | ccp | S/Sst : lt or to lt brn gy       | 9.6                      | 654.0       | 226.8       | 267.7       | 6.3          | 153.2       | 494.5      | 159.5          | 4.80           | 0032-1L |
| 1760.67 | ccp | S/Sst : lt or to lt brn gy       | 9.9                      | 753.6       | 298.1       | 278.3       | 8.4          | 168.8       | 576.4      | 177.2          | 4.85           | 0033-1L |
| 1763.22 | ccp | S/Sst : pl y brn                 | 10.5                     | 52.9        | 1.4         | 2.4         | 1.1          | 47.9        | 3.9        | 49.0           | 0.54           | 0034-1L |

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 6608/11-2

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  |
|---------|-----|---------------------------|--------------------------|-------------|-------------|-------------|--------------|-------------|------------|----------------|----------------|---------|
| 1765.08 | ccp | S/Sst : pl y brn          | 7.8                      | 56.0        | 0.2         | 0.4         | 2.5          | 52.9        | 0.6        | 55.4           | 0.17           | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 2.2                      | 258.2       | 1.1         | 1.6         | 25.9         | 229.6       | 2.7        | 255.5          | 57.00          | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 8.0                      | 120.6       | 0.3         | 1.5         | 12.3         | 106.5       | 1.8        | 118.8          | 4.51           | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 2.3                      | 293.1       | 1.7         | 2.8         | 35.3         | 253.2       | 4.5        | 288.6          | 53.20          | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 1.3                      | 64.1        | 0.5         | 1.0         | 6.7          | 56.0        | 1.4        | 62.7           | 21.70          | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 1.9                      | 165.8       | 1.1         | 2.6         | 17.2         | 144.9       | 3.7        | 162.1          | 39.50          | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 9.7                      | 100.6       | 0.6         | 1.0         | 4.7          | 94.3        | 1.6        | 99.0           | 2.51           | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 9.2                      | 99.0        | 1.0         | 0.3         | 4.6          | 93.1        | 1.3        | 97.7           | 3.30           | 0022-1L |

Table 8b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                        | EOM    | Sat   | Aro   | Asph | NSO   | HC     | Non-HC | Sample  |
|---------|-----|----------------------------------|--------|-------|-------|------|-------|--------|--------|---------|
| 1614.00 | swc | Sh/Clst: dsk y brn               | 2508   | 48    | 48    | 193  | 2217  | 96     | 2411   | 0006-1L |
| 1643.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 15034  | 164   | 329   | 859  | 13681 | 494    | 14540  | 0039-1L |
| 1682.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 11594  | 730   | 365   | 1364 | 9134  | 1096   | 10498  | 0047-1L |
| 1700.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 9484   | 228   | 228   | 1030 | 7996  | 456    | 9027   | 0049-1L |
| 1731.00 | swc | Sh/Clst: blk                     | 10915  | 367   | 528   | 1315 | 8704  | 895    | 10019  | 0013-1L |
| 1742.10 | ccp | S/Sst : drk y brn                | 77693  | 32752 | 31855 | 823  | 12263 | 64607  | 13086  | 0025-1L |
| 1742.50 | ccp | Sh/Clst: brn blk                 | 22025  | 5105  | 5527  | 1095 | 10296 | 10633  | 11391  | 0026-1L |
| 1744.25 | ccp | S/Sst : m y brn to pl y brn      | 110441 | 46786 | 42039 | 935  | 20680 | 88825  | 21615  | 0027-1L |
| 1748.77 | ccp | S/Sst : m y brn                  | 115319 | 48620 | 44033 | 1015 | 21649 | 92654  | 22665  | 0028-1L |
| 1751.57 | ccp | S/Sst : m y brn                  | 94414  | 39313 | 34259 | 998  | 19844 | 73572  | 20842  | 0029-1L |
| 1754.49 | ccp | S/Sst : m y brn                  | 101241 | 42145 | 37425 | 1440 | 20229 | 79570  | 21670  | 0030-1L |
| 1757.37 | ccp | S/Sst : m y brn                  | 128508 | 51203 | 52081 | 938  | 24285 | 103285 | 25223  | 0031-1L |
| 1759.00 | ccp | bulk                             | 66013  | -     | -     | -    | -     | -      | -      | 0076-0B |
| 1759.95 | ccp | S/Sst : lt or to lt brn gy       | 67983  | 23575 | 27822 | 656  | 15929 | 51398  | 16585  | 0032-1L |
| 1760.67 | ccp | S/Sst : lt or to lt brn gy       | 75891  | 30019 | 28030 | 841  | 16999 | 58050  | 17840  | 0033-1L |

Table 80: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                 | EOM    | Sat | Aro  | Asph  | NSO    | HC   | Non-HC | Sample  |
|---------|-----|---------------------------|--------|-----|------|-------|--------|------|--------|---------|
| 1763.22 | ccp | S/Sst : pl y brn          | 5028   | 135 | 231  | 108   | 4553   | 366  | 4661   | 0034-1L |
| 1765.08 | ccp | S/Sst : pl y brn          | 7197   | 25  | 50   | 324   | 6796   | 76   | 7121   | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 115267 | 486 | 730  | 11555 | 102495 | 1217 | 114050 | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 15037  | 38  | 190  | 1528  | 13280  | 228  | 14809  | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 127434 | 740 | 1234 | 15358 | 110101 | 1974 | 125459 | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 48195  | 359 | 719  | 5008  | 42107  | 1079 | 47115  | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 88663  | 588 | 1373 | 9219  | 77482  | 1961 | 86701  | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 10328  | 66  | 99   | 484   | 9678   | 165  | 10163  | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 10760  | 109 | 36   | 499   | 10116  | 145  | 10615  | 0022-1L |

Depth unit of measure: m

| Depth   | Typ | Lithology                        | EOM     | Sat     | Aro    | Asph  | NSO    | HC      | Non-HC | Sample  |
|---------|-----|----------------------------------|---------|---------|--------|-------|--------|---------|--------|---------|
| 1614.00 | swc | Sh/Clst: dsk y brn               | 157.75  | 3.03    | 3.03   | 12.19 | 139.49 | 6.06    | 151.68 | 0006-1L |
| 1643.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 488.15  | 5.35    | 10.70  | 27.89 | 444.20 | 16.06   | 472.09 | 0039-1L |
| 1682.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 368.07  | 23.20   | 11.60  | 43.30 | 289.97 | 34.80   | 333.27 | 0047-1L |
| 1700.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 551.43  | 13.28   | 13.28  | 59.94 | 464.92 | 26.57   | 524.86 | 0049-1L |
| 1731.00 | swc | Sh/Clst: blk                     | 46.25   | 1.56    | 2.24   | 5.57  | 36.88  | 3.80    | 42.46  | 0013-1L |
| 1742.10 | ccp | S/Sst : drk y brn                | 1334.94 | 562.75  | 547.34 | 14.14 | 210.71 | 1110.09 | 224.85 | 0025-1L |
| 1742.50 | ccp | Sh/Clst: brn blk                 | 523.17  | 121.28  | 131.30 | 26.02 | 244.57 | 252.58  | 270.59 | 0026-1L |
| 1744.25 | ccp | S/Sst : m y brn to pl y brn      | 1884.67 | 798.40  | 717.40 | 15.96 | 352.92 | 1515.80 | 368.87 | 0027-1L |
| 1748.77 | ccp | S/Sst : m y brn                  | 2551.32 | 1075.68 | 974.20 | 22.46 | 478.98 | 2049.88 | 501.44 | 0028-1L |
| 1751.57 | ccp | S/Sst : m y brn                  | 1983.51 | 825.92  | 719.73 | 20.97 | 416.89 | 1545.65 | 437.86 | 0029-1L |
| 1754.49 | ccp | S/Sst : m y brn                  | 1830.77 | 762.13  | 676.77 | 26.05 | 365.82 | 1438.90 | 391.88 | 0030-1L |
| 1757.37 | ccp | S/Sst : m y brn                  | 2113.62 | 842.17  | 856.60 | 15.43 | 399.43 | 1698.77 | 414.86 | 0031-1L |
| 1759.00 | ccp | bulk                             | -       | -       | -      | -     | -      | -       | -      | 0076-0B |
| 1759.95 | ccp | S/Sst : lt or to lt brn gy       | 1416.32 | 491.15  | 579.64 | 13.67 | 331.86 | 1070.79 | 345.53 | 0032-1L |
| 1760.67 | ccp | S/Sst : lt or to lt brn gy       | 1564.77 | 618.97  | 577.95 | 17.35 | 350.50 | 1196.92 | 367.85 | 0033-1L |

Table 8c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                 | EOM     | Sat   | Aro   | Asph   | NSO     | HC    | Non-HC  | Sample  |
|---------|-----|---------------------------|---------|-------|-------|--------|---------|-------|---------|---------|
| 1763.22 | ccp | S/Sst : pl y brn          | 931.21  | 25.01 | 42.88 | 20.08  | 843.23  | 67.89 | 863.32  | 0034-1L |
| 1765.08 | ccp | S/Sst : pl y brn          | 4234.08 | 14.97 | 29.95 | 191.01 | 3998.15 | 44.92 | 4189.16 | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 202.22  | 0.85  | 1.28  | 20.27  | 179.82  | 2.14  | 200.09  | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 333.42  | 0.84  | 4.22  | 33.90  | 294.46  | 5.06  | 328.36  | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 239.54  | 1.39  | 2.32  | 28.87  | 206.96  | 3.71  | 235.83  | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 222.10  | 1.66  | 3.32  | 23.08  | 194.04  | 4.98  | 217.12  | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 224.46  | 1.49  | 3.48  | 23.34  | 196.16  | 4.97  | 219.50  | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 411.50  | 2.63  | 3.95  | 19.30  | 385.62  | 6.58  | 404.92  | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 326.09  | 3.31  | 1.10  | 15.13  | 306.55  | 4.41  | 321.68  | 0022-1L |

Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                        | Sat   | Aro   | Asph  | NSO   | Total  | HC    | Non-HC | Recov.<br>MPLC | Recov.<br>Asph | Sample  |
|---------|-----|----------------------------------|-------|-------|-------|-------|--------|-------|--------|----------------|----------------|---------|
| 1614.00 | swc | Sh/Clst: dsk y brn               | 1.92  | 1.92  | 7.73  | 88.43 | 100.00 | 3.84  | 96.16  | -              | 0.08           | 0006-1L |
| 1643.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 1.10  | 2.19  | 5.71  | 91.00 | 100.00 | 3.29  | 96.71  | 1.32           | 0.83           | 0039-1L |
| 1682.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 6.30  | 3.15  | 11.76 | 78.78 | 100.00 | 9.45  | 90.55  | 1.68           | 0.65           | 0047-1L |
| 1700.00 | cut | Sh/Clst: lt brn gy to drk brn gy | 2.41  | 2.41  | 10.87 | 84.31 | 100.00 | 4.82  | 95.18  | 1.39           | 0.71           | 0049-1L |
| 1731.00 | swc | Sh/Clst: blk                     | 3.37  | 4.84  | 12.05 | 79.74 | 100.00 | 8.21  | 91.79  | 1.27           | 1.00           | 0013-1L |
| 1742.10 | ccp | S/Sst : drk y brn                | 42.16 | 41.00 | 1.06  | 15.78 | 100.00 | 83.16 | 16.84  | 1.19           | 0.97           | 0025-1L |
| 1742.50 | ccp | Sh/Clst: brn blk                 | 23.18 | 25.10 | 4.97  | 46.75 | 100.00 | 48.28 | 51.72  | -              | 0.05           | 0026-1L |
| 1744.25 | ccp | S/Sst : m y brn to pl y brn      | 42.36 | 38.07 | 0.85  | 18.73 | 100.00 | 80.43 | 19.57  | 1.23           | 0.97           | 0027-1L |
| 1748.77 | ccp | S/Sst : m y brn                  | 42.16 | 38.18 | 0.88  | 18.77 | 100.00 | 80.35 | 19.65  | 1.23           | 0.97           | 0028-1L |
| 1751.57 | ccp | S/Sst : m y brn                  | 41.64 | 36.29 | 1.06  | 21.02 | 100.00 | 77.92 | 22.08  | 1.23           | 0.97           | 0029-1L |
| 1754.49 | ccp | S/Sst : m y brn                  | 41.63 | 36.97 | 1.42  | 19.98 | 100.00 | 78.60 | 21.40  | 1.25           | 0.98           | 0030-1L |
| 1757.37 | ccp | S/Sst : m y brn                  | 39.84 | 40.53 | 0.73  | 18.90 | 100.00 | 80.37 | 19.63  | 1.58           | 0.98           | 0031-1L |
| 1759.00 | ccp | bulk                             | -     | -     | -     | -     | -      | -     | -      | -              | -              | 0076-0B |
| 1759.95 | ccp | S/Sst : lt or to lt brn gy       | 34.68 | 40.93 | 0.97  | 23.43 | 100.00 | 75.60 | 24.40  | 1.48           | 0.97           | 0032-1L |
| 1760.67 | ccp | S/Sst : lt or to lt brn gy       | 39.56 | 36.94 | 1.11  | 22.40 | 100.00 | 76.49 | 23.51  | 1.85           | 0.97           | 0033-1L |
| 1763.22 | ccp | S/Sst : pl y brn                 | 2.69  | 4.60  | 2.16  | 90.55 | 100.00 | 7.29  | 92.71  | -              | 0.02           | 0034-1L |



Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                 | Sat  | Aro  | Asph  | NSO   | Total  | HC   | Non-HC | Recov.<br>MPLC | Recov.<br>Asph | Sample  |
|---------|-----|---------------------------|------|------|-------|-------|--------|------|--------|----------------|----------------|---------|
| 1765.08 | ccp | S/Sst : pl y brn          | 0.35 | 0.71 | 4.51  | 94.43 | 100.00 | 1.06 | 98.94  | -              | 0.05           | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 0.42 | 0.63 | 10.02 | 88.92 | 100.00 | 1.06 | 98.94  | 1.25           | 0.96           | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 0.25 | 1.27 | 10.17 | 88.31 | 100.00 | 1.52 | 98.48  | -              | 0.10           | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 0.58 | 0.97 | 12.05 | 86.40 | 100.00 | 1.55 | 98.45  | 1.22           | 0.98           | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 0.75 | 1.49 | 10.39 | 87.37 | 100.00 | 2.24 | 97.76  | 1.24           | 0.88           | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 0.66 | 1.55 | 10.40 | 87.39 | 100.00 | 2.21 | 97.79  | 1.23           | 0.96           | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 0.64 | 0.96 | 4.69  | 93.71 | 100.00 | 1.60 | 98.40  | -              | 0.05           | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 1.01 | 0.34 | 4.64  | 94.01 | 100.00 | 1.35 | 98.65  | -              | 0.05           | 0022-1L |

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 6608/11-2

| Depth unit of measure: m |     |                                  | Sat  | HC     | Asp  |         |
|--------------------------|-----|----------------------------------|------|--------|------|---------|
| Depth                    | Typ | Lithology                        | Aro  | Non-HC | NSO  | Sample  |
| 1614.00                  | swc | Sh/Clst: dsk y brn               | 1.00 | 0.04   | 0.09 | 0006-1L |
| 1643.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 0.50 | 0.03   | 0.06 | 0039-1L |
| 1682.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 2.00 | 0.10   | 0.15 | 0047-1L |
| 1700.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 1.00 | 0.05   | 0.13 | 0049-1L |
| 1731.00                  | swc | Sh/Clst: blk                     | 0.70 | 0.09   | 0.15 | 0013-1L |
| 1742.10                  | ccp | S/Sst : drk y brn                | 1.03 | 4.94   | 0.07 | 0025-1L |
| 1742.50                  | ccp | Sh/Clst: brn blk                 | 0.92 | 0.93   | 0.11 | 0026-1L |
| 1744.25                  | ccp | S/Sst : m y brn to pl y brn      | 1.11 | 4.11   | 0.05 | 0027-1L |
| 1748.77                  | ccp | S/Sst : m y brn                  | 1.10 | 4.09   | 0.05 | 0028-1L |
| 1751.57                  | ccp | S/Sst : m y brn                  | 1.15 | 3.53   | 0.05 | 0029-1L |
| 1754.49                  | ccp | S/Sst : m y brn                  | 1.13 | 3.67   | 0.07 | 0030-1L |
| 1757.37                  | ccp | S/Sst : m y brn                  | 0.98 | 4.09   | 0.04 | 0031-1L |
| 1759.00                  | ccp | bulk                             | -    | -      | -    | 0076-0B |
| 1759.95                  | ccp | S/Sst : lt or to lt brn gy       | 0.85 | 3.10   | 0.04 | 0032-1L |
| 1760.67                  | ccp | S/Sst : lt or to lt brn gy       | 1.07 | 3.25   | 0.05 | 0033-1L |

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology                 | Sat  | HC     | Asp  | Sample  |
|---------|-----|---------------------------|------|--------|------|---------|
|         |     |                           | Aro  | Non-HC | NSO  |         |
| 1763.22 | ccp | S/Sst : pl y brn          | 0.58 | 0.08   | 0.02 | 0034-1L |
| 1765.08 | ccp | S/Sst : pl y brn          | 0.50 | 0.01   | 0.05 | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 0.67 | 0.01   | 0.11 | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 0.20 | 0.02   | 0.12 | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 0.60 | 0.02   | 0.14 | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 0.50 | 0.02   | 0.12 | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 0.43 | 0.02   | 0.12 | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 0.67 | 0.02   | 0.05 | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 3.00 | 0.01   | 0.05 | 0022-1L |

Table 8F: Iatroscan TLC Bulk Composition: Absolute yields in mg/g rock for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology | Sat HC | Aro HC | NSO   | Asp  | HC     | Non-HC | EOM    | Sample  |
|---------|-----|-----------|--------|--------|-------|------|--------|--------|--------|---------|
| 1614.00 | swc | Sh/Clst   | 0.09   | -      | 2.22  | 0.19 | 0.09   | 2.41   | 2.51   | 0006-1L |
| 1742.10 | ccp | S/Sst     | 40.74  | 26.45  | 9.68  | 0.82 | 67.19  | 10.50  | 77.69  | 0025-1L |
| 1742.50 | ccp | Sh/Clst   | 9.68   | 8.58   | 2.67  | 1.10 | 18.26  | 3.77   | 22.03  | 0026-1L |
| 1744.25 | ccp | S/Sst     | 60.36  | 36.72  | 12.43 | 0.94 | 97.08  | 13.37  | 110.44 | 0027-1L |
| 1747.00 | oil | bulk      | 27.41  | 33.64  | 2.65  | 0.70 | 61.05  | 3.35   | 64.40  | 0001-0B |
| 1748.77 | ccp | S/Sst     | 56.21  | 49.31  | 8.78  | 1.02 | 105.52 | 9.80   | 115.32 | 0028-1L |
| 1751.57 | ccp | S/Sst     | 50.38  | 31.42  | 11.61 | 1.00 | 81.80  | 12.61  | 94.41  | 0029-1L |
| 1754.49 | ccp | S/Sst     | 53.69  | 34.38  | 11.73 | 1.44 | 88.07  | 13.17  | 101.24 | 0030-1L |
| 1757.37 | ccp | S/Sst     | 63.59  | 52.55  | 11.43 | 0.94 | 116.14 | 12.37  | 128.51 | 0031-1L |
| 1759.95 | ccp | S/Sst     | 35.38  | 24.77  | 7.17  | 0.66 | 60.15  | 7.83   | 67.98  | 0032-1L |
| 1760.67 | ccp | S/Sst     | 39.77  | 28.09  | 7.20  | 0.84 | 67.85  | 8.04   | 75.89  | 0033-1L |
| 1763.22 | ccp | S/Sst     | 0.96   | 0.47   | 3.49  | 0.11 | 1.43   | 3.59   | 5.03   | 0034-1L |
| 1765.08 | ccp | S/Sst     | 0.18   | -      | 6.69  | 0.32 | 0.18   | 7.01   | 7.20   | 0035-1L |
| 1798.00 | swc | Sh/Clst   | 0.34   | 0.57   | 12.59 | 1.53 | 0.91   | 14.12  | 15.04  | 0016-1L |
| 2093.00 | swc | Sh/Clst   | 0.24   | -      | 9.60  | 0.48 | 0.24   | 10.09  | 10.33  | 0021-1L |
| 2127.00 | swc | Sh/Clst   | 0.53   | -      | 9.74  | 0.50 | 0.53   | 10.24  | 10.76  | 0022-1L |

Table 8G: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Typ | Lithology | Sat HC | Aro HC | NSO   | Asp   | Total  | HC    | Non-HC | Recov. Iatr. | Recov. Asp | Sample  |
|---------|-----|-----------|--------|--------|-------|-------|--------|-------|--------|--------------|------------|---------|
| 1614.00 | swc | Sh/Clst   | 3.74   | -      | 88.53 | 7.73  | 100.00 | 3.74  | 96.26  | 0.08         | 1.00       | 0006-1L |
| 1742.10 | ccp | S/Sst     | 52.44  | 34.04  | 12.46 | 1.06  | 100.00 | 86.48 | 13.52  | 0.55         | 0.97       | 0025-1L |
| 1742.50 | ccp | Sh/Clst   | 43.95  | 38.95  | 12.12 | 4.97  | 100.00 | 82.90 | 17.10  | 0.48         | 1.00       | 0026-1L |
| 1744.25 | ccp | S/Sst     | 54.65  | 33.25  | 11.26 | 0.85  | 100.00 | 87.90 | 12.10  | 0.79         | 0.97       | 0027-1L |
| 1747.00 | oil | bulk      | 42.56  | 52.23  | 4.12  | 1.09  | 100.00 | 94.80 | 5.20   | 1.86         | 0.98       | 0001-0B |
| 1748.77 | ccp | S/Sst     | 48.74  | 42.76  | 7.62  | 0.88  | 100.00 | 91.50 | 8.50   | 0.88         | 0.97       | 0028-1L |
| 1751.57 | ccp | S/Sst     | 53.36  | 33.28  | 12.30 | 1.06  | 100.00 | 86.64 | 13.36  | 0.73         | 0.97       | 0029-1L |
| 1754.49 | ccp | S/Sst     | 53.03  | 33.96  | 11.58 | 1.42  | 100.00 | 86.99 | 13.01  | 0.75         | 0.98       | 0030-1L |
| 1757.37 | ccp | S/Sst     | 49.48  | 40.89  | 8.90  | 0.73  | 100.00 | 90.37 | 9.63   | 0.92         | 0.98       | 0031-1L |
| 1759.95 | ccp | S/Sst     | 52.04  | 36.44  | 10.55 | 0.97  | 100.00 | 88.48 | 11.52  | 0.86         | 0.97       | 0032-1L |
| 1760.67 | ccp | S/Sst     | 52.40  | 37.01  | 9.48  | 1.11  | 100.00 | 89.41 | 10.59  | 0.96         | 0.97       | 0033-1L |
| 1763.22 | ccp | S/Sst     | 19.14  | 9.38   | 69.32 | 2.16  | 100.00 | 28.52 | 71.48  | 0.11         | 1.00       | 0034-1L |
| 1765.08 | ccp | S/Sst     | 2.56   | -      | 92.92 | 4.51  | 100.00 | 2.56  | 97.44  | 0.07         | 1.00       | 0035-1L |
| 1798.00 | swc | Sh/Clst   | 2.28   | 3.81   | 83.75 | 10.17 | 100.00 | 6.08  | 93.92  | 0.09         | 1.00       | 0016-1L |
| 2093.00 | swc | Sh/Clst   | 2.36   | -      | 92.95 | 4.69  | 100.00 | 2.36  | 97.64  | 0.10         | 1.00       | 0021-1L |
| 2127.00 | swc | Sh/Clst   | 4.88   | -      | 90.48 | 4.64  | 100.00 | 4.88  | 95.12  | 0.09         | 1.00       | 0022-1L |

Table 9a<sup>1</sup> Peak areas Saturated Hydrocarbon GC data

| Depth   | Sample type | Desc            | %Lithology | nC15   | nC16   | Norpristane | nC17   | Pristane | nC18   | Phytane | nC19   | nC20   | nC21   | nC22   |
|---------|-------------|-----------------|------------|--------|--------|-------------|--------|----------|--------|---------|--------|--------|--------|--------|
| 1614    | swc         | shale/claystone | 100        | 0      | 52475  | 52329       | 69329  | 115330   | 132908 | 68178   | 161156 | 138137 | 126221 | 111601 |
| 1643    | cut         | shale/claystone | 25         | 0      | 19626  | 19529       | 34103  | 36056    | 51740  | 37202   | 23883  | 30663  | 17346  | 28861  |
| 1682    | cut         | shale/claystone | 15         | 0      | 0      | 0           | 21284  | 24784    | 55187  | 38603   | 51864  | 64350  | 50055  | 54015  |
| 1700    | cut         | shale/claystone | 15         | 0      | 0      | 0           | 4956   | 11943    | 28512  | 25787   | 26100  | 29451  | 27093  | 23664  |
| 1731    | swc         | shale/claystone | 95         | 81175  | 114061 | 51631       | 91204  | 86818    | 84847  | 36957   | 158654 | 103275 | 134415 | 125255 |
| 1742.1  | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1742.5  | ccp         | shale/claystone | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1744.25 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1748.77 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1751.57 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1754.49 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1757.37 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1759.95 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1760.67 | ccp         | sandstone/sand  | 100        | 1      | 0      | 0           | 0      | 0        | 0      | 0       | 0      | 0      | 0      | 0      |
| 1763.22 | ccp         | sandstone/sand  | 100        | 102103 | 293649 | 300432      | 485532 | 297464   | 257236 | 155532  | 186782 | 177020 | 120787 | 81700  |
| 1765.08 | ccp         | sandstone/sand  | 100        | 0      | 155894 | 151770      | 236889 | 218312   | 185935 | 85315   | 165857 | 136798 | 88548  | 75665  |
| 1787    | cut         | shale/claystone | 20         | 0      | 0      | 0           | 9372   | 17531    | 10561  | 13844   | 8340   | 5447   | 4314   | 9771   |
| 1798    | swc         | shale/claystone | 95         | 28057  | 113453 | 67377       | 198249 | 402209   | 290983 | 98001   | 379621 | 259348 | 360680 | 272931 |
| 1898    | cut         | shale/claystone | 80         | 43310  | 86198  | 64596       | 60210  | 193102   | 79263  | 70320   | 132744 | 69467  | 91943  | 67019  |
| 1922    | cut         | shale/claystone | 80         | 49120  | 104660 | 49417       | 134482 | 134826   | 210283 | 79137   | 351029 | 240608 | 327585 | 277268 |
| 1994    | cut         | shale/claystone | 15         | 65062  | 112697 | 78316       | 115071 | 340407   | 142566 | 122475  | 202313 | 143535 | 204128 | 155517 |
| 2093    | swc         | shale/claystone | 100        | 135285 | 506121 | 354478      | 575623 | 407562   | 455528 | 184191  | 508309 | 418087 | 430747 | 319679 |
| 2127    | swc         | shale/claystone | 100        | 86103  | 259450 | 90939       | 521387 | 313174   | 583177 | 199208  | 773374 | 650380 | 958140 | 694321 |

Table 9a<sup>1</sup> Peak areas Saturated Hydrocarbon GC data

| Depth   | Sample type | Desc            | %Lithology | nC25    | nC26   | nC27    | nC28   | nC29    | nC30   | nC31    | nC32   | nC33   | nC34  | Sample number |
|---------|-------------|-----------------|------------|---------|--------|---------|--------|---------|--------|---------|--------|--------|-------|---------------|
| 1614    | swc         | shale/claystone | 100        | 197747  | 130763 | 288158  | 139042 | 195439  | 104895 | 127310  | 35210  | 52249  | 0     | U29/0006-1    |
| 1643    | cut         | shale/claystone | 25         | 35260   | 35772  | 33263   | 17417  | 29293   | 40454  | 18381   | 22967  | 4441   | 0     | U29/0039-1    |
| 1682    | cut         | shale/claystone | 15         | 48948   | 37248  | 54612   | 26828  | 44575   | 37283  | 36591   | 17732  | 16512  | 6524  | U29/0047-1    |
| 1700    | cut         | shale/claystone | 15         | 41678   | 22978  | 45195   | 21741  | 39585   | 29115  | 22301   | 18198  | 9621   | 0     | U29/0049-1    |
| 1731    | swc         | shale/claystone | 95         | 612997  | 220380 | 376273  | 152882 | 313654  | 112459 | 227651  | 48339  | 52834  | 9351  | U29/0013-1    |
| 1742.1  | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0025-1    |
| 1742.5  | ccp         | shale/claystone | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0026-1    |
| 1744.25 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0027-1    |
| 1748.77 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0028-1    |
| 1751.57 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0029-1    |
| 1754.49 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0030-1    |
| 1757.37 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0031-1    |
| 1759.95 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0032-1    |
| 1760.67 | ccp         | sandstone/sand  | 100        | 0       | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0033-1    |
| 1763.22 | ccp         | sandstone/sand  | 100        | 27729   | 0      | 0       | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0034-1    |
| 1765.08 | ccp         | sandstone/sand  | 100        | 55875   | 27609  | 44048   | 0      | 0       | 0      | 0       | 0      | 0      | 0     | U29/0035-1    |
| 1787    | cut         | shale/claystone | 20         | 45522   | 17002  | 40411   | 12814  | 31102   | 24067  | 0       | 20958  | 17788  | 0     | U29/0074-2    |
| 1798    | swc         | shale/claystone | 95         | 978969  | 388309 | 621310  | 234241 | 579459  | 176535 | 329566  | 63672  | 53846  | 0     | U29/0016-1    |
| 1898    | cut         | shale/claystone | 80         | 450279  | 188495 | 425300  | 164999 | 508259  | 177799 | 286695  | 122255 | 93162  | 13511 | U29/0063-2    |
| 1922    | cut         | shale/claystone | 80         | 1252295 | 492013 | 1065788 | 450159 | 1044882 | 417834 | 462643  | 232349 | 137609 | 29776 | U29/0065-1    |
| 1994    | cut         | shale/claystone | 15         | 963780  | 345533 | 1046281 | 352876 | 1192935 | 265359 | 1785702 | 228483 | 87952  | 14744 | U29/0068-4    |
| 2093    | swc         | shale/claystone | 100        | 782844  | 234643 | 775060  | 211697 | 421410  | 126782 | 249270  | 69001  | 59449  | 0     | U29/0021-1    |
| 2127    | swc         | shale/claystone | 100        | 1827684 | 683080 | 2603947 | 498088 | 870442  | 186085 | 370567  | 129700 | 81960  | 0     | U29/0022-1    |

Table 9a: Quantitative Analysis of Saturated Fraction for well NOCS 6608/11-2

| 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 |      |
|----------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|
| 1742.10m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1742.50m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1744.25m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1748.77m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1751.57m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1754.49m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1757.37m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1759.95m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1760.67m | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1763.22m | 0.87                | 2.51                | 2.57                | 4.15                | 2.54              | 2.20                | 1.33              | 1.60                | 1.51                | 1.03                | 0.70                | 0.59                | 0.33                | 0.24                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 0.00 |
| 1765.08m | 0.00                | 5.98                | 5.82                | 9.09                | 8.38              | 7.14                | 3.27              | 6.36                | 5.25                | 3.40                | 2.90                | 2.28                | 1.70                | 2.14                | 1.06                | 1.69                | 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 NOCS 6608/11-2

| Depth unit of measure: m |     |                                  | Pristane | Pristane | Pristane/nC17 | Phytane |      | nC17      |         |
|--------------------------|-----|----------------------------------|----------|----------|---------------|---------|------|-----------|---------|
| Depth                    | Typ | Lithology                        | nC17     | Phytane  | Phytane/nC18  | nC18    | CPI1 | nC17+nC27 | Sample  |
| 1614.00                  | swc | Sh/Clst: dsk y brn               | 1.66     | 1.69     | 3.24          | 0.51    | 1.80 | 0.19      | 0006-1L |
| 1643.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 1.06     | 0.97     | 1.47          | 0.72    | 0.94 | 0.51      | 0039-1L |
| 1682.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 1.16     | 0.64     | 1.66          | 0.70    | 1.41 | 0.28      | 0047-1L |
| 1700.00                  | cut | Sh/Clst: lt brn gy to drk brn gy | 2.41     | 0.46     | 2.66          | 0.90    | 1.53 | 0.10      | 0049-1L |
| 1731.00                  | swc | Sh/Clst: blk                     | 0.95     | 2.35     | 2.19          | 0.44    | 2.54 | 0.20      | 0013-1L |
| 1742.10                  | ccp | S/Sst : drk y brn                | -        | -        | -             | -       | -    | -         | 0025-1L |
| 1742.50                  | ccp | Sh/Clst: brn blk                 | -        | -        | -             | -       | -    | -         | 0026-1L |
| 1744.25                  | ccp | S/Sst : m y brn to pl y brn      | -        | -        | -             | -       | -    | -         | 0027-1L |
| 1748.77                  | ccp | S/Sst : m y brn                  | -        | -        | -             | -       | -    | -         | 0028-1L |
| 1751.57                  | ccp | S/Sst : m y brn                  | -        | -        | -             | -       | -    | -         | 0029-1L |
| 1754.49                  | ccp | S/Sst : m y brn                  | -        | -        | -             | -       | -    | -         | 0030-1L |
| 1757.37                  | ccp | S/Sst : m y brn                  | -        | -        | -             | -       | -    | -         | 0031-1L |
| 1759.95                  | ccp | S/Sst : lt or to lt brn gy       | -        | -        | -             | -       | -    | -         | 0032-1L |
| 1760.67                  | ccp | S/Sst : lt or to lt brn gy       | -        | -        | -             | -       | -    | -         | 0033-1L |
| 1763.22                  | ccp | S/Sst : pl y brn                 | 0.61     | 1.91     | 1.01          | 0.60    | -    | 1.00      | 0034-1L |

Table 9B: Saturated Hydrocarbon Ratios (peak area) for well NOCS 6608/11-2

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> |         |
| 1765.08 | ccp | S/Sst : pl y brn          | 0.92            | 2.56            | 2.01                 | 0.46           | 2.50 | 0.84             | 0035-1L |
| 1787.00 | cut | Sh/Clst: blk to brn blk   | 1.87            | 1.27            | 1.43                 | 1.31           | 1.65 | 0.19             | 0074-2L |
| 1798.00 | swc | Sh/Clst: dsk y brn to blk | 2.03            | 4.10            | 6.02                 | 0.34           | 2.53 | 0.24             | 0016-1L |
| 1898.00 | cut | Sh/Clst: blk to brn blk   | 3.21            | 2.75            | 3.62                 | 0.89           | 2.58 | 0.12             | 0063-2L |
| 1922.00 | cut | Sh/Clst: blk to brn blk   | 1.00            | 1.70            | 2.66                 | 0.38           | 2.26 | 0.11             | 0065-1L |
| 1994.00 | cut | Sh/Clst: blk to brn blk   | 2.96            | 2.78            | 3.44                 | 0.86           | 4.10 | 0.10             | 0068-4L |
| 2093.00 | swc | Sh/Clst: blk              | 0.71            | 2.21            | 1.75                 | 0.40           | 3.01 | 0.43             | 0021-1L |
| 2127.00 | swc | Sh/Clst: blk              | 0.60            | 1.57            | 1.76                 | 0.34           | 3.19 | 0.17             | 0022-1L |

Table 10a: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 6608/11-2

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> |
|--------------|------------|------------------|------------|------------------|-----------------|------------|--------------------|----------------|---------------|
| 1614.00      | swc        | Sh/Clst          | -          | -28.70           | -32.46          | -          | -                  | -              | 0006-1        |
| 1731.00      | swc        | Sh/Clst          | -          | -28.62           | -27.41          | -          | -                  | -              | 0013-1        |
| 1742.10      | ccp        | S/Sst            | -          | -28.70           | -27.28          | -          | -                  | -              | 0025-1        |
| 1757.37      | ccp        | S/Sst            | -          | -28.59           | -27.20          | -          | -                  | -              | 0031-1        |
| 1760.67      | ccp        | S/Sst            | -          | -28.65           | -27.19          | -          | -                  | -              | 0033-1        |
| 1798.00      | swc        | Sh/Clst          | -          | -32.44           | -26.92          | -          | -                  | -              | 0016-1        |
| 1994.00      | cut        | Sh/Clst          | -          | -33.35           | -27.19          | -          | -                  | -              | 0068-4        |
| 2127.00      | swc        | Sh/Clst          | -          | -34.27           | -29.61          | -          | -                  | -              | 0022-1        |

Table 10b: Tabulation of cv values from carbon isotope data for well NOCS 6608/11-2

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> |
|--------------|------------|------------------|------------------|-----------------|-----------------|---------------|
| 1614.00      | swc        | Sh/Clst          | -28.70           | -32.46          | -11.10          | 0006-1        |
| 1731.00      | swc        | Sh/Clst          | -28.62           | -27.41          | -0.09           | 0013-1        |
| 1742.10      | ccp        | S/Sst            | -28.70           | -27.28          | 0.40            | 0025-1        |
| 1757.37      | ccp        | S/Sst            | -28.59           | -27.20          | 0.30            | 0031-1        |
| 1760.67      | ccp        | S/Sst            | -28.65           | -27.19          | 0.47            | 0033-1        |
| 1798.00      | swc        | Sh/Clst          | -32.44           | -26.92          | 10.66           | 0016-1        |
| 1994.00      | cut        | Sh/Clst          | -33.35           | -27.19          | 12.36           | 0068-4        |
| 2127.00      | swc        | Sh/Clst          | -34.27           | -29.61          | 9.32            | 0022-1        |

Table 11a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 6608/11-2

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 |
|---------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1614.00 | Sh/Clst   | 3.18   | 0.76   | 0.32   | 0.76   | 0.43   | 0.10   | 0.09   | 0.13   | 0.09   | 0.11   | 0.66   | 0.42   | 0.50   | 35.69  | 0006-1 |
| 1731.00 | Sh/Clst   | 1.36   | 0.58   | 0.14   | 1.03   | 0.51   | 0.07   | 0.07   | 0.07   | 0.06   | 0.02   | 0.26   | 0.31   | 1.79   | 35.83  | 0013-1 |
| 1742.10 | S/Sst     | 1.02   | 0.51   | 0.35   | 0.62   | 0.38   | 0.25   | 0.26   | 0.41   | 0.20   | 0.37   | 0.90   | 0.40   | 0.15   | 56.53  | 0025-1 |
| 1757.37 | S/Sst     | 1.04   | 0.51   | 0.38   | 0.62   | 0.38   | 0.30   | 0.31   | 0.50   | 0.24   | 0.39   | 0.88   | 0.41   | 0.18   | 53.86  | 0031-1 |
| 1760.67 | S/Sst     | 1.02   | 0.51   | 0.41   | 0.62   | 0.38   | 0.41   | 0.38   | 0.62   | 0.28   | 0.38   | 0.87   | 0.42   | 0.21   | 52.44  | 0033-1 |
| 1798.00 | Sh/Clst   | 1.69   | 0.63   | 0.27   | 1.36   | 0.58   | -      | 0.54   | 0.40   | 0.35   | 0.01   | 0.79   | 0.58   | 0.28   | 11.43  | 0016-1 |
| 1994.00 | Sh/Clst   | 1.58   | 0.61   | 0.36   | 1.31   | 0.57   | 0.08   | 0.56   | 0.43   | 0.36   | 0.01   | 1.00   | 0.68   | 0.37   | 14.04  | 0068-4 |
| 2127.00 | Sh/Clst   | 1.05   | 0.51   | 0.24   | 0.55   | 0.35   | 0.07   | 0.08   | 0.15   | 0.08   | 0.01   | 0.71   | 0.41   | 0.55   | 15.16  | 0022-1 |

List of Triterpane Distribution Ratios

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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 NOCS 6608/11-2

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> |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| 1614.00      | Sh/Clst          | 0.60          | 23.66         | 61.04         | 0.78          | 0.77          | 0.33          | 0.24          | 0.44          | 0.31          | 1.03           | 0006-1        |
| 1731.00      | Sh/Clst          | 0.46          | 10.02         | 45.68         | 0.22          | 0.81          | 0.15          | 0.10          | 0.30          | 0.11          | 0.47           | 0013-1        |
| 1742.10      | S/Sst            | 0.77          | 50.36         | 77.47         | 1.05          | 0.77          | 0.49          | 0.36          | 0.63          | 1.01          | 3.46           | 0025-1        |
| 1757.37      | S/Sst            | 0.77          | 49.68         | 78.02         | 1.04          | 0.78          | 0.44          | 0.32          | 0.64          | 0.99          | 3.53           | 0031-1        |
| 1760.67      | S/Sst            | 0.75          | 49.77         | 77.33         | 0.92          | 0.77          | 0.35          | 0.25          | 0.63          | 0.99          | 3.40           | 0033-1        |
| 1798.00      | Sh/Clst          | 0.23          | 10.16         | 60.78         | 0.24          | 0.88          | 0.32          | 0.17          | 0.44          | 0.11          | 0.86           | 0016-1        |
| 1994.00      | Sh/Clst          | 0.21          | 10.52         | 52.48         | 0.11          | 0.84          | 0.09          | 0.05          | 0.36          | 0.12          | 0.62           | 0068-4        |
| 2127.00      | Sh/Clst          | 0.10          | 12.05         | 54.94         | 0.51          | 0.83          | 0.22          | 0.17          | 0.38          | 0.14          | 0.69           | 0022-1        |

List of Sterane Distribution Ratios

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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 6608/11-2

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                          |        |
| 1614.00 | Sh/Clst   | 1893.1<br>10010.6<br>8527.7     | 1399.0<br>2141.8<br>1388.8      | 787.2<br>1345.4<br>2502.9      | 2515.9<br>4669.4<br>1762.0     | 434.7<br>0.0<br>1029.1    | 3024.8<br>13227.4<br>2373.2     | 9630.8<br>6950.7<br>834.5      | 1254.9<br>0.0<br>1039.4     | 5358.2<br>3099.8<br>939.9      | 0006-1 |
| 1731.00 | Sh/Clst   | 1070.2<br>31439.2<br>20557.9    | 544.6<br>6454.6<br>2534.8       | 2908.2<br>2044.3<br>4539.8     | 2613.0<br>22648.0<br>973.3     | 847.7<br>0.0<br>817.9     | 13966.2<br>30546.0<br>0.0       | 19038.4<br>88272.1<br>0.0      | 2094.1<br>0.0<br>0.0        | 11057.5<br>2093.2<br>0.0       | 0013-1 |
| 1742.10 | S/Sst     | 62257.6<br>89228.9<br>21277.3   | 54167.1<br>60689.1<br>27268.6   | 18648.8<br>35441.6<br>20969.0  | 58884.4<br>18972.0<br>25296.2  | 13041.9<br>0.0<br>13766.3 | 85508.9<br>144600.1<br>19049.2  | 87316.2<br>16941.3<br>11070.2  | 36919.8<br>0.0<br>14239.5   | 169935.5<br>38586.9<br>9339.6  | 0025-1 |
| 1757.37 | S/Sst     | 97249.0<br>128691.3<br>30272.1  | 81762.6<br>107350.6<br>42378.2  | 29131.1<br>61780.9<br>36300.0  | 96750.3<br>33577.5<br>45550.1  | 22028.5<br>0.0<br>24583.3 | 139312.0<br>207603.0<br>39238.5 | 145048.0<br>28151.0<br>22331.3 | 64961.4<br>0.0<br>31070.4   | 331476.7<br>58357.8<br>19516.8 | 0031-1 |
| 1760.67 | S/Sst     | 122959.5<br>184766.1<br>41636.2 | 113050.2<br>201185.4<br>70675.1 | 43188.9<br>122827.4<br>64108.6 | 134151.0<br>57407.1<br>95811.2 | 31353.2<br>0.0<br>48921.7 | 227739.3<br>297061.1<br>86190.1 | 232755.2<br>43283.4<br>51978.9 | 113808.0<br>0.0<br>71702.9  | 643032.4<br>83066.9<br>46741.1 | 0033-1 |
| 1798.00 | Sh/Clst   | 1171.9<br>62866.3<br>20071.4    | 650.1<br>90517.7<br>749.3       | 1680.1<br>0.0<br>5804.3        | 2765.8<br>17811.5<br>1002.1    | 0.0<br>0.0<br>1622.2      | 13046.7<br>46312.9<br>450.7     | 22073.6<br>12441.2<br>474.7    | 25026.7<br>0.0<br>216.3     | 8110.9<br>4201.5<br>228.6      | 0016-1 |
| 1994.00 | Sh/Clst   | 197.5<br>35995.3<br>15671.7     | 181.4<br>18663.3<br>925.4       | 1862.1<br>2054.3<br>5664.5     | 896.8<br>23288.5<br>724.1      | 1160.3<br>0.0<br>1051.0   | 9745.2<br>27386.7<br>0.0        | 15361.5<br>0.0<br>1232.4       | 15456.0<br>6400.7<br>1739.1 | 15167.7<br>898.0<br>0.0        | 0068-4 |
| 2127.00 | Sh/Clst   | 678.3<br>16927.4<br>29681.3     | 306.3<br>5545.7<br>807.2        | 2329.6<br>2191.9<br>4516.5     | 2262.0<br>13720.9<br>380.0     | 2061.8<br>0.0<br>1182.0   | 13060.8<br>30912.7<br>0.0       | 13723.8<br>12400.5<br>282.9    | 2586.1<br>0.0<br>2235.2     | 7787.3<br>3131.2<br>152.5      | 0022-1 |

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                          |                    |                      |                     |         |        |
| 1614.00 | Sh/Clst   | 1877.0<br>2973.1<br>914.5       | 1703.5<br>1465.8<br>943.4        | 3113.6<br>2050.5<br>1855.9      | 1434.3<br>1378.3<br>1267.1       | 545.0<br>1229.4<br>3043.5      | 616.6<br>840.3     | 1225.9<br>1720.5     | 658.4<br>1587.0     | 1048.1  | 0006-1 |
| 1731.00 | Sh/Clst   | 3152.2<br>6981.6<br>3820.6      | 1011.4<br>3861.5<br>1601.8       | 1584.2<br>1869.6<br>4606.8      | 923.1<br>1654.7<br>2114.2        | 903.7<br>720.0<br>14385.1      | 713.9<br>1437.6    | 2873.8<br>9244.4     | 850.2<br>2252.0     | 4713.0  | 0013-1 |
| 1742.10 | S/Sst     | 101055.6<br>92725.5<br>11452.9  | 48809.2<br>53453.2<br>29429.0    | 105306.8<br>32283.5<br>54351.0  | 67899.1<br>62917.4<br>46101.4    | 24125.0<br>21533.8<br>29012.6  | 24812.4<br>18937.0 | 51519.4<br>34390.4   | 27703.6<br>47075.8  | 34850.7 | 0025-1 |
| 1757.37 | S/Sst     | 152501.3<br>160526.7<br>20651.9 | 77612.8<br>88271.0<br>52921.4    | 182047.6<br>55548.2<br>100844.8 | 118385.1<br>109775.7<br>88228.5  | 41838.4<br>36206.6<br>53599.0  | 41050.4<br>33446.0 | 87362.6<br>61703.8   | 48459.3<br>85898.4  | 56358.5 | 0031-1 |
| 1760.67 | S/Sst     | 197097.7<br>274336.6<br>42016.4 | 101267.9<br>158769.9<br>103968.9 | 273741.1<br>91243.8<br>189934.5 | 173708.0<br>185895.0<br>166284.7 | 65173.7<br>62801.3<br>104922.5 | 65984.4<br>56901.2 | 135978.5<br>108452.8 | 78685.1<br>151522.4 | 98748.4 | 0033-1 |
| 1798.00 | Sh/Clst   | 6981.4<br>1554.0<br>4048.4      | 1383.3<br>1023.1<br>1005.7       | 832.2<br>2853.4<br>4157.1       | 1063.4<br>1433.4<br>3513.9       | 959.9<br>2161.3<br>8893.4      | 779.3<br>11460.0   | 1947.9<br>9765.9     | 596.7<br>1581.4     | 1289.0  | 0016-1 |

\* 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    | 27dBS  | 27dBR  | 27daR  | 27daS  | 28dBS  | 28dBR  | 28daR* | Sample |
|---------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|         |           | 29dBS* | 28daS* | 27aaR  | 29dBR  | 29daR  | 28aaS  | 29daS* | 28BS   |        |        |
|         |           | 28aaR  | 29aaS  | 29BR   | 29BS   | 29aaR  |        |        |        |        |        |
| 1994.00 | Sh/Clst   | 1044.9 | 323.7  | 178.5  | 166.1  | 502.4  | 113.4  | 931.5  | 287.5  | 0.0    | 0068-4 |
|         |           | 1343.1 | 2919.7 | 653.1  | 563.3  | 786.3  | 5715.5 | 5664.9 | 1134.6 |        |        |
|         |           | 3218.4 | 931.4  | 2385.8 | 2501.9 | 7921.9 |        |        |        |        |        |
| 2127.00 | Sh/Clst   | 1890.3 | 428.0  | 560.3  | 495.0  | 551.2  | 321.0  | 1317.7 | 287.8  | 1580.9 | 0022-1 |
|         |           | 818.1  | 350.9  | 4776.6 | 1063.4 | 359.7  | 1178.2 | 1520.6 | 654.7  |        |        |
|         |           | 2304.8 | 608.6  | 1571.6 | 1505.9 | 4440.4 |        |        |        |        |        |

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

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6608/11-2

Depth unit of measure: m

| Depth   | Lithology | 27 $\beta$ $\beta$ R | 27 $\beta$ $\beta$ S | 28 $\beta$ $\beta$ R | 28 $\beta$ $\beta$ S | 29 $\beta$ $\beta$ R | 29 $\beta$ $\beta$ S | 30 $\beta$ $\beta$ R | 30 $\beta$ $\beta$ S | Sample |
|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|
| 1614.00 | Sh/Clst   | 2422.4               | 1797.7               | 1960.0               | 1754.2               | 2248.9               | 1906.8               | 557.0                | 494.2                | 0006-1 |
| 1731.00 | Sh/Clst   | 5259.9               | 2275.5               | 6736.6               | 2036.2               | 3997.0               | 2899.3               | 4087.0               | 7775.1               | 0013-1 |
| 1742.10 | S/Sst     | 90813.6              | 69657.4              | 54850.5              | 64503.6              | 85334.1              | 77773.5              | 18295.5              | 17791.6              | 0025-1 |
| 1757.37 | S/Sst     | 158176.3             | 122199.9             | 98966.7              | 116962.8             | 155752.2             | 147673.5             | 34080.8              | 32644.9              | 0031-1 |
| 1760.67 | S/Sst     | 258066.0             | 218670.7             | 181066.4             | 208323.8             | 294801.0             | 279760.0             | 71726.6              | 67438.5              | 0033-1 |
| 1798.00 | Sh/Clst   | 1425.4               | 1422.0               | 5313.8               | 2001.0               | 5637.1               | 5025.1               | 3449.3               | 0.0                  | 0016-1 |
| 1994.00 | Sh/Clst   | 778.5                | 1177.0               | 2524.6               | 455.1                | 2027.4               | 2630.6               | 3087.9               | 13039.7              | 0068-4 |
| 2127.00 | Sh/Clst   | 1096.9               | 1313.0               | 1244.7               | 742.8                | 1464.3               | 1674.9               | 3666.7               | 0.0                  | 0022-1 |

Table 11f: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6608/11-2

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>25nor28aß</u> | <u>25nor30aß</u> | <u>Sample</u> |
|--------------|------------------|------------------|------------------|---------------|
| 1614.00      | Sh/Clst          | 0.0              | 3096.8           | 0006-1        |
| 1731.00      | Sh/Clst          | 0.0              | 2821.3           | 0013-1        |
| 1742.10      | S/Sst            | 46859.9          | 106125.6         | 0025-1        |
| 1757.37      | S/Sst            | 82596.2          | 200570.9         | 0031-1        |
| 1760.67      | S/Sst            | 144364.2         | 388643.8         | 0033-1        |
| 1798.00      | Sh/Clst          | 0.0              | 2238.6           | 0016-1        |
| 1994.00      | Sh/Clst          | 6551.4           | 3179.4           | 0068-4        |
| 2127.00      | Sh/Clst          | 0.0              | 1473.4           | 0022-1        |

Table 11g: Amount of triterpanes (ppb) m/z 191 SIR for Well NOCS 6608/11-2

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      | 29Ba     | 300     | 30aß     | 30Ba     | 30G      | 31aßS     |        |
|         |           | 31aßR    | 32aßS    | 32aßR    | 33aßS    | 33aßR   | 34aßS    | 34aßR    | 35aßS    | 35aßR     |        |
| 1742.10 | S/Sst     | 230527.2 | 200569.9 | 69052.8  | 218037.1 | 48291.4 | 316621.9 | 323314.0 | 136706.5 | 629236.7  | 0025-1 |
|         |           | 330396.7 | 224719.5 | 131233.0 | 70249.5  | 0.0     | 535424.8 | 62730.4  | 0.0      | 142879.4  |        |
|         |           | 78785.7  | 100970.0 | 77644.0  | 93666.8  | 50973.9 | 70535.5  | 40990.7  | 52726.0  | 34582.5   |        |
| 1757.37 | S/Sst     | 212343.9 | 178529.2 | 63608.1  | 211255.0 | 48099.4 | 304188.8 | 316713.4 | 141843.8 | 723781.8  | 0031-1 |
|         |           | 280998.4 | 234400.8 | 134899.0 | 73316.8  | 0.0     | 453302.7 | 61467.9  | 0.0      | 127424.6  |        |
|         |           | 66099.3  | 92533.2  | 79261.4  | 99459.0  | 53677.9 | 85677.6  | 48760.5  | 67842.4  | 42615.2   |        |
| 1760.67 | S/Sst     | 162651.5 | 149543.4 | 57130.5  | 177455.6 | 41474.1 | 301254.7 | 307889.8 | 150545.8 | 850606.5  | 0033-1 |
|         |           | 244409.5 | 266129.1 | 162476.7 | 75938.4  | 0.0     | 392953.9 | 57255.4  | 0.0      | 109881.3  |        |
|         |           | 55076.6  | 93489.4  | 84803.1  | 126739.5 | 64713.9 | 114012.7 | 68757.9  | 94849.0  | 61829.4   |        |

Table 11n: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 6608/11-2

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    | 29BR     | 29BS     | 29aaR    |         |          |          |          |        |
| 1742.10 | S/Sst     | 374188.4 | 180730.7 | 389929.7 | 251416.7 | 89329.9  | 91875.5 | 190765.9 | 102580.9 | 129045.0 | 0025-1 |
|         |           | 343343.6 | 197926.3 | 119539.3 | 232970.4 | 79735.2  | 70119.8 | 127340.6 | 174312.3 |          |        |
|         |           | 42407.9  | 108969.7 | 201250.7 | 170704.1 | 107427.8 |         |          |          |          |        |
| 1757.37 | S/Sst     | 332987.7 | 169468.1 | 397502.3 | 258494.7 | 91354.5  | 89633.9 | 190756.8 | 105811.3 | 123059.1 | 0031-1 |
|         |           | 350511.3 | 192740.3 | 121289.9 | 239696.1 | 79057.3  | 73029.7 | 134730.7 | 187559.9 |          |        |
|         |           | 45093.5  | 115554.4 | 220195.4 | 192647.5 | 117033.9 |         |          |          |          |        |
| 1760.67 | S/Sst     | 260721.8 | 133957.7 | 362106.1 | 229781.8 | 86212.1  | 87284.5 | 179873.0 | 104085.1 | 130624.8 | 0033-1 |
|         |           | 362893.8 | 210021.6 | 120697.7 | 245902.8 | 83073.9  | 75269.2 | 143461.9 | 200434.6 |          |        |
|         |           | 55579.5  | 137530.6 | 251246.3 | 219962.2 | 138792.0 |         |          |          |          |        |

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

Table 11i: Amount of standard and weight of sample for Well NOCS 6608/11-2

Depth unit of measure: m

| <u>Depth</u> | <u>Lithology</u> | <u>Standard</u> | <u>Amount</u> | <u>Weight</u> | <u>Sample</u> |
|--------------|------------------|-----------------|---------------|---------------|---------------|
| 1742.10      | S/Sst            | 17264.5         | 1.400         | 21.9          | 0025-1        |
| 1757.37      | S/Sst            | 36638.3         | 1.400         | 17.5          | 0031-1        |
| 1760.67      | S/Sst            | 63756.4         | 1.400         | 16.6          | 0033-1        |



## **1 Introduction**

This report gives the result of routine vitrinite reflectance analyses of 16 samples from well 6608/11-2 offshore Norway.

## **2 Material**

The material was provided from the client as 4 cuttings samples (DC), 11 side wall cores (SWC) and 1 core chip (CCP).

Information on stratigraphy in well 6608/11-2 was not provided from the client.

## **3 Analytical techniques**

### **3.1 Preparation**

The sample material was slightly crushed and embedded in an epoxy resin to make briquettes, dried and then dry grounded to a flat surface. The sample surface was impregnated with a somewhat thinned epoxy, dried and finally polished using 0.25 micron diamond paste and magnesium oxide as the two final steps.

### **3.2 Analysis**

The analytical equipment being used was a Zeiss MPM 03 photometer microscope equipped with an Epiplan-Neofluar 40/0.90 oil objective. The sensitive measuring spot was kept constant for all 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 polarizer and using a stationary stage. This procedure is called measurement of random reflectance (%Rm). The photometer is calibrated daily against a standard of known reflectance (%Rm= 0.588) and routinely (daily) checked against two other standards of significant different reflectances ( %Rm=0.879 and 1.696). A deviation from these values of less than  $\pm 0.01$  and  $\pm 0.02$  respectively is considered as acceptable. The calibration is

routinely checked during the course of measurements at least every hour, and a deviation of less than  $\pm 0.005$  is considered as acceptable.

For each sample at least 20 points were measured if possible, and quality ratings are given to various important aspects which may affect the measurements. These 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 from the measurements are presented in appendix for each sample both as tabulated data and histograms. A true vitrinite population is selected among the readings based on observations made during the measurements, and arithmetic mean values and standard deviation are calculated for this population and other populations. A quality rating is given to the true population. There is one data sheet with raw data for each sample. The results are listed in table 1. Figure 1 shows a vitrinite reflectance versus depth plot.

## **4 Results**

The samples showed that the actual well interval (1402-2215mRKB) was characterized by quick facies changes. The variations in vitrinite reflectance values in the upper part of the well seemed to be related to these changes.

**Table 1. Vitrinite reflectance data table well 6608/11-2**

| <b>Analysis type:</b>            |           | Vitrinite reflectance |            |                   |             |                    |                    |                |              |
|----------------------------------|-----------|-----------------------|------------|-------------------|-------------|--------------------|--------------------|----------------|--------------|
| <b>Well:</b>                     |           | 6608/11-2             |            |                   |             |                    |                    |                |              |
| <b>Number of samples:</b>        |           | 16                    |            |                   |             |                    |                    |                |              |
| <b>Time period for analysis:</b> |           | feb.01                |            |                   |             |                    |                    |                |              |
| <b>Analysis performed by:</b>    |           | K. Aasgaard, IFE      |            |                   |             |                    |                    |                |              |
| <b>Analysis ordered by:</b>      |           | Geolab Nor/Statoil    |            |                   |             |                    |                    |                |              |
|                                  |           |                       |            |                   |             |                    |                    |                |              |
| IFE sample code                  | Depth (m) | Sample type           | Lithology  | Vitr. refl. (%Rm) | Stand. dev. | Number of readings | Sample description | Sample quality | Sample prep. |
| 20010034                         | 1402      | SWC                   | clyst      | 0.22              | 0.05        | 5                  | -oo-o              | P              | bulk         |
| 20010035                         | 1537      | SWC                   | clyst/slst | 0.21              | 0.02        | 6                  | -ooo-o             | P              | bulk         |
| 20010036                         | 1584      | SWC                   | clyst/slst | 0.23              | 0.05        | 12                 | -oo-o              | M/P            | bulk         |
| 20010037                         | 1614      | SWC                   | clyst      | 0.20              | 0.01        | 6                  | -oo-o              | P              | bulk         |
| 20010038                         | 1731      | SWC                   | clyst      | 0.28              | 0.04        | 24                 | oooooo             | G              | bulk         |
| 20010039                         | 1742.5    | CCP                   | clyst/slst | 0.20              | 0.03        | 20                 | ooo-o              | M              | bulk         |
| 20010040                         | 1787      | DC                    | coal       | 0.33              | 0.02        | 23                 | oooooo             | G              | bulk         |
| 20010041                         | 1815.5    | SWC                   | clyst      | 0.32              | 0.03        | 10                 | -oo-o              | M              | bulk         |
| 20010042                         | 1895      | SWC                   | clyst      | barren            |             |                    |                    |                | bulk         |
| 20010043                         | 1964      | DC                    | clyst/coal | 0.30              | 0.04        | 22                 | oooooo             | G              | bulk         |
| 20010044                         | 2050.5    | SWC                   | clyst      | barren            |             |                    |                    |                | bulk         |
| 20010045                         | 2127      | SWC                   | clyst      | 0.28              | 0.05        | 22                 | ooo-o              | M              | bulk         |
| 20010046                         | 2147      | DC                    | coal/clyst | 0.34              | 0.03        | 24                 | oooooo             | G              | bulk         |
| 20010047                         | 2182      | SWC                   | clyst/sst  | 0.28              | 0.01        | 2                  | -oo-o              | P              | bulk         |
| 20010048                         | 2206      | SWC                   | lst?       | barren            |             |                    |                    |                | bulk         |
| 20010049                         | 2215      | DC                    | clyst      | 0.31              | 0.03        | 24                 | oooooo             | G              | bulk         |

**Legend to vitrinite reflectance data table**

| Lithology code  |       | Sample quality                                       |                      | Sample preparation |   |
|---|-------|--|----------------------|--------------------|---|
| Sandstone   | sst   | G  | good                 | HF                 | sample treated with hydrofluoric acid prior to analysis |
| Siltstone   | slst  | M  | moderate             |                    |   |
| Claystone   | clyst | P  | poor                 | bulk               | sample treated as bulk rock                             |
| Shale   | sh    | st   | hydrocarbon staining |                    |   |
| Limestone   | lst   |  |                      |                    |   |
| Coal  | coal  |  |                      |                    |   |
| Sample description and measurement evaluation (- o +) |       |  |                      | Options            |   |
| oooooo  | 1     | Abundance of vitrinite                               |                      | - o                |   |
| 123456  | 2     | Identification of vitrinite                          |                      | - o +              |   |
|   | 3     | Type of vitrinite                                    |                      | - o +              |   |
|   | 4     | Vitrinite fragment size                              |                      | - o                |   |
|   | 5     | Vitrinite surface quality                            |                      | - o                |   |
|   | 6     | Abundance of pyrite                                  |                      | o +                |   |
| Options legend:                                       |       | -  |                      |                    |   |
|   |       | o  |                      |                    |   |
|   |       | +  |                      |                    |   |
|   |       | may give too low vitrinite reflectance sample value  |                      |                    |   |
|   |       | reliable vitrinite reflectance sample value          |                      |                    |   |
|   |       | may give too high vitrinite reflectance sample value |                      |                    |   |

Table 1 Analytical Program for NOCS Well 6608/11-2, Falk (oil and gas)

| Sample Depth (m)  | Sample Type | Sample Code | Lithology Description | Picking for screening | Prøvepreparering (Kjemematerialie) | Prøvepreparering (Løsningsmiddel-Ekstraksjon) | Leco TOC | RockEval | GHM Pyrolysis-GC | Picking for Extraction | Topping                                  | Iatroscan | SOXTEC Extraction | MPLC & Deasphaltene | EOM GC | Whole Oil GC | Sat GC (Q) | Aro GC (Non-Q) | Sat GCMS (Q) | Aro GCMS (Non-Q) | Isotope of EOM/fractions § | API Gravity (Westlab) | Vitrinite Reflectance | Visual Kerogen | Gas composition and isotopes (IFE) |
|---|-------------|-------------|-----------------------|-----------------------|------------------------------------|---|----------|----------|------------------|------------------------|--|-----------|-------------------|---------------------|--------|--------------|------------|----------------|--------------|------------------|----------------------------|-----------------------|-----------------------|----------------|------------------------------------|
| Table nos.  |             |             | 3                     |                       |                                    |   | 5        | 5        |                  |                        |  | 8         | 8                 | 8                   |        | 13           | 9          | 9              | 11           | 12               | 10                         | 17                    | 4                     | 7              | 14                                 |
| 1747 m  | o           | U36/0001    |                       |                       |                                    |   |          |          |                  |                        | x  | x         |                   | x                   |        | x            | x          | x              | x            | x                | x                          |                       |                       |                |                                    |
| 1747 m  | g           | U36/0002    |                       |                       |                                    |   |          |          |                  |                        |  |           |                   |                     |        |              |            |                |              |                  |                            |                       |                       |                | x                                  |
| Total   |             |             |                       |                       |                                    |   |          |          |                  | 1                      | 1  |           | 1                 |                     | 1      | 1            | 1          | 1              | 1            | 1                |                            |                       |                       |                | 1                                  |
| Sample type key c = Cuttings s = SWC p = Conv core/plug o=oil g= gas m=mud  |             |             |                       |                       |                                    |   |          |          |                  |                        |  |           |                   |                     |        |              |            |                |              |                  |                            |                       |                       |                |                                    |
| § Isotope analysis on topped oil and sat, aro, NSO and asphaltene fractions |             |             |                       |                       |                                    |   |          |          |                  |                        | Q=quantitative, non-Q = not quantitative |           |                   |                     |        |              |            |                |              |                  |                            |                       |                       |                |                                    |

Table 8a: MPLC Bulk Composition: Weight of Oil and Fraction for NOCS 6608/11-2

| Well      | Description | Whole oil (mg) | Light (mg) | Topped (mg) | Sat (mg) | Aro (mg) | Asph (mg) | NSO (mg) | HC (mg) | Non-HC (mg) | Sample   |
|-----------|-------------|----------------|------------|-------------|----------|----------|-----------|----------|---------|-------------|----------|
| 6608/11-2 | MDT 1E      | 65.0           | 0.6        | 64.4        | 28.0     | 27.5     | 0.7       | 8.3      | 55.4    | 9.0         | U36/0001 |

Table 8b: MPLC Bulk Composition: Comparison of topped oil (%) for NOCS 6608/11-2

| Well      | Description | Sat   | Aro   | Asph | NSO   | Total  | HC    | Non-HC | Recov. MPLC | Recov. Asph | Sample   |
|-----------|-------------|-------|-------|------|-------|--------|-------|--------|-------------|-------------|----------|
| 6608/11-2 | MDT 1E      | 43.47 | 42.63 | 1.09 | 12.82 | 100.00 | 86.10 | 13.90  | 1.19        | 0.98        | U36/0001 |

Table 8c: MPLC Bulk Composition: Ratios in topped oil for NOCS 6608/11-2

| Well      | Description | Sat  | HC     | Asp  | Sample   |
|-----------|-------------|------|--------|------|----------|
|           |             | Aro  | Non-HC | NSO  |          |
| 6608/11-2 | MDT 1E      | 1.02 | 6.19   | 0.08 | U36/0001 |

Table 8f: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for NOCS 6608/11-2

| <u>Well</u> | <u>Description</u> | <u>Sat HC</u> | <u>Aro HC</u> | <u>NSO</u> | <u>Asp</u> | <u>Total</u> | <u>HC</u> | <u>Non-HC</u> | <u>Recov. Iatr.</u> | <u>Recov. Asp</u> | <u>Sample</u> |
|-------------|--------------------|---------------|---------------|------------|------------|--------------|-----------|---------------|---------------------|-------------------|---------------|
| 6608/11-2   | MDT 1E             | 42.56         | 52.23         | 4.12       | 1.09       | 100.00       | 94.80     | 5.20          | 1.86                | 0.98              | U36/0001      |

Tab. Ja<sup>1</sup> Peak areas Saturated Hydrocarbon GC .a

| Depth (m) | Desc   | nC15 | nC16 | Norpristane | nC17 | Pristane | nC18 | Phytane | nC19 | nC20 | nC21 | nC22 | nC23 | nC24 |
|-----------|--------|------|------|-------------|------|----------|------|---------|------|------|------|------|------|------|
| 1747      | MDT 1E | 0    | 0    | 0           | 0    | 0        | 0    | 0       | 0    | 0    | 0    | 0    | 0    | 0    |

| Depth (m) | Desc   | nC25 | nC26 | nC27 | nC28 | nC29 | nC30 | nC31 | nC32 | nC33 | nC34 | Sample number |
|-----------|--------|------|------|------|------|------|------|------|------|------|------|---------------|
| 1747      | MDT 1E | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | U36/0001-0    |

| Depth (m) | Desc   | 2MN | 1MN | BPh | 2EN | 1EN | 2.6+2.7DMN | 1.6DMN | 1.5DMN | 1.3.7TMN | 1.3.6TMN | 1.3.5TMN | 1.4.6+2.3.6TMN |
|-----------|--------|-----|-----|-----|-----|-----|------------|--------|--------|----------|----------|----------|----------------|
| 1747      | MDT 1E | 0   | 0   | 0   | 0   | 0   | 0          | 0      | 0      | 0        | 0        | 0        | 0              |

| Depth (m) | Desc   | P | 3MP | 2MP | 9MP | 1MP | DBT | 4MDBT | 2+3MDBT | 1MDBT | Sample number |
|-----------|--------|---|-----|-----|-----|-----|-----|-------|---------|-------|---------------|
| 1747      | MDT 1E | 0 | 0   | 0   | 0   | 0   | 0   | 0     | 0       | 0     | U36/0001-0    |

Table 9a: Quantitative Analysis of Saturated Fraction for WELL NOCS 6608/11-2

| 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 |      |
|--------|---------------------|---------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|
| MDT 1E | 0.00                | 0.00                | 0.00                | 0.00                | 0.00              | 0.00                | 0.00              | 0.00                | 0.00                | 0.00                | 0.00                | 0.00                | 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 NOCS 6608/11-2

| Well      | Description | Pristane | Pristane | Pristane/nC17 | Phytane | CPI1 | nC17      | Sample   |
|-----------|-------------|----------|----------|---------------|---------|------|-----------|----------|
|           |             | nC17     | Phytane  | Phytane/nC18  | nC18    |      | nC17+nC27 |          |
| 6608/11-2 | MDT 1E      | -        | -        | -             | -       | -    | -         | U36/0001 |