

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|-----------------------------------|---------|--------|-----|-----------|--------|-----------------|
| Internal Standard (Inadeq) | | | | | | |
| 1) | 6.43 | 217.2 | | 24baa | 409 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34,08 | 191,2 | s1 | 19/3 | 12 | 0 |
| 3) | 36,06 | 191,2 | s1 | 20/3 | 19 | 0 |
| 4) | 38,10 | 191,2 | s1 | 21/3 | 27 | 0 |
| 5) | 42,07 | 191,2 | s1 | 23/3 | 113 | 1 |
| 6) | 43,19 | 191,2 | s1 | 24/3 | 44 | 1 |
| 7) | 45,47 | 191,2 | s1 | 25/3 | 24 | 0 |
| 8) | 47,03 | 191,2 | s1 | 24/4 | 168 | 2 |
| 9) | 47,12 | 191,2 | s1 | 26/3R | 19 | 0 |
| 10) | 47,25 | 191,2 | s1 | 26/3S | 18 | 0 |
| 11) | 50,77 | 191,2 | s1 | 28/3R | 26 | 0 |
| 12) | 51,02 | 191,2 | s1 | 28/3S | 23 | 0 |
| 13) | 51,82 | 191,2 | s1 | 29/3R | 22 | 0 |
| 14) | 52,11 | 191,2 | s1 | 29/3S | 21 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52,99 | 191,2 | s1 | 27Ts | 127 | 2 |
| 16) | 53,26 | 177,15 | s1 | 25nor28ab | 15 | 0 |
| 17) | 53,66 | 191,2 | s1 | 27Tm | 303 | 4 |
| 18) | 54,04 | 177,15 | s1 | 25nor29ab | 43 | 1 |
| 19) | 54,15 | 191,2 | s1 | 27b | 91 | 1 |
| 20) | 55,22 | 191,2 | s1 | 28ab | 13 | 0 |
| 21) | 55,44 | 177,15 | s1 | 25nor30ab | 32 | 0 |
| 22) | 55,93 | 191,2 | s1 | 29ab | 669 | 9 |
| 23) | 56,03 | 191,2 | s1 | 29Ts | 101 | 1 |
| 24) | 56,28 | 191,2 | s1 | 30D | 14 | 0 |
| 25) | 56,72 | 191,2 | s1 | 29ba | 49 | 1 |
| 26) | 57,31 | 191,2 | s2 | 30ab | 433 | 4 |
| 27) | 57,64 | 191,2 | s1 | 30D13 | 11 | 0 |
| 28) | 57,92 | 191,2 | s2 | 30ba | 35 | 0 |
| 29) | 58,89 | 191,2 | s1 | 31abS | 180 | 2 |
| 30) | 59,08 | 191,2 | s1 | 31abR | 127 | 2 |
| 31) | 59,42 | 191,2 | s1 | 30G | 29 | 0 |
| 32) | 59,61 | 191,2 | s1 | 31ba | 20 | 0 |
| 33) | 60,11 | 191,2 | s1 | 32abS | 83 | 1 |
| 34) | 60,39 | 191,2 | s1 | 32abR | 62 | 1 |
| 35) | 61,57 | 191,2 | s1 | 33abS | 49 | 1 |
| 36) | 61,93 | 191,2 | s1 | 33abR | 41 | 1 |
| 37) | 63,11 | 191,2 | s1 | 34abS | 30 | 0 |
| 38) | 63,61 | 191,2 | s1 | 34abR | 24 | 0 |
| 39) | 64,88 | 191,2 | s1 | 35abS | 24 | 0 |
| 40) | 65,61 | 191,2 | s1 | 35abR | 32 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1814S.D
Sample name: 31/5-6 swc, 1814s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 6
Method: MSD_S_E2
Operator: Marian
Date: 29 Aug 2000 23:22

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------|---------|-------|-----|-------|--------|-----------------|
| Steranes: | | | | | | |
| 41) | 38,61 | 217,2 | s3 | 21aa | 14 | 0 |
| 42) | 40,26 | 217,2 | s3 | 21bb | 58 | 1 |
| 43) | 40,39 | 217,2 | s3 | 22aa | 10 | 0 |
| 44) | 42,62 | 217,2 | s3 | 22bb | 36 | 1 |
| 45) | 48,96 | 217,2 | s3 | 27dbS | 41 | 1 |
| 46) | 49,59 | 217,2 | s3 | 27dbR | 23 | 0 |
| 47) | 51,95 | 218,2 | s3 | 27bbR | 114 | 2 |
| 48) | 52,10 | 218,2 | s3 | 27bbS | 84 | 2 |
| 49) | 52,50 | 217,2 | s3 | 27aaR | 54 | 1 |
| 50) | 53,70 | 218,2 | s3 | 28bbR | 54 | 1 |
| 51) | 53,85 | 218,2 | s3 | 28bbS | 48 | 1 |
| 52) | 54,82 | 217,2 | s3 | 29aaS | 36 | 1 |
| 53) | 55,13 | 218,2 | s3 | 29bbR | 80 | 1 |
| 54) | 55,22 | 218,2 | s3 | 29bbS | 73 | 1 |
| 55) | 55,82 | 217,2 | s3 | 29aaR | 30 | 1 |
| 56) | 56,29 | 218,2 | s3 | 30bbR | 7 | 0 |
| 57) | 56,34 | 218,2 | s3 | 30bbS | 10 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
 Petroleum Geochemistry Laboratories

Data file name: **1840S.D**
 Sample name: **31/5-6 swc, 1840s**
 Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
 Misc. info.:
 Vial no.: 7
 Method: MSD_S_E2
 Operator: Marian
 Date: 30 Aug 2000 00:50

Response curve y = ax
 Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|--------|-----|-----------|--------|--------|
| Internal standard (if added) | | | | | | |
| 1) | 46.49 | 217,2 | | 24baa | 2067 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34,08 | 191,2 | s1 | 19/3 | 73 | 1 |
| 3) | 36,00 | 191,2 | s1 | 20/3 | 47 | 0 |
| 4) | 38,11 | 191,2 | s1 | 21/3 | 53 | 0 |
| 5) | 42,08 | 191,2 | s1 | 23/3 | 222 | 2 |
| 6) | 43,21 | 191,2 | s1 | 24/3 | 83 | 1 |
| 7) | 45,49 | 191,2 | s1 | 25/3 | 46 | 0 |
| 8) | 47,03 | 191,2 | s1 | 24/4 | 325 | 3 |
| 9) | 47,12 | 191,2 | s1 | 26/3R | 30 | 0 |
| 10) | 47,25 | 191,2 | s1 | 26/3S | 31 | 0 |
| 11) | 50,77 | 191,2 | s1 | 28/3R | 44 | 0 |
| 12) | 51,03 | 191,2 | s1 | 28/3S | 32 | 0 |
| 13) | 51,82 | 191,2 | s1 | 29/3R | 42 | 0 |
| 14) | 52,12 | 191,2 | s1 | 29/3S | 52 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52,98 | 191,2 | s1 | 27Ts | 272 | 2 |
| 16) | 53,24 | 177,15 | s1 | 25nor28ab | 26 | 0 |
| 17) | 53,66 | 191,2 | s1 | 27Tm | 698 | 6 |
| 18) | 53,87 | 177,15 | s1 | 25nor29ab | 0 | 0 |
| 19) | 54,15 | 191,2 | s1 | 27b | 260 | 2 |
| 20) | 55,19 | 191,2 | s1 | 28ab | 654 | 6 |
| 21) | 55,43 | 177,15 | s1 | 25nor30ab | 19 | 0 |
| 22) | 55,93 | 191,2 | s1 | 29ab | 2352 | 21 |
| 23) | 56,03 | 191,2 | s1 | 29Ts | 299 | 3 |
| 24) | 56,27 | 191,2 | s1 | 30D | 36 | 0 |
| 25) | 56,72 | 191,2 | s1 | 29ba | 176 | 2 |
| 26) | 57,30 | 191,2 | s2 | 30ab | 1634 | 9 |
| 27) | 57,66 | 191,2 | s1 | 30D13 | 71 | 1 |
| 28) | 57,92 | 191,2 | s2 | 30ba | 120 | 1 |
| 29) | 58,89 | 191,2 | s1 | 31abS | 796 | 7 |
| 30) | 59,08 | 191,2 | s1 | 31abR | 700 | 6 |
| 31) | 59,42 | 191,2 | s1 | 30G | 129 | 1 |
| 32) | 59,60 | 191,2 | s1 | 31ba | 108 | 1 |
| 33) | 60,13 | 191,2 | s1 | 32abS | 413 | 4 |
| 34) | 60,39 | 191,2 | s1 | 32abR | 351 | 3 |
| 35) | 61,56 | 191,2 | s1 | 33abS | 242 | 2 |
| 36) | 61,93 | 191,2 | s1 | 33abR | 188 | 2 |
| 37) | 63,11 | 191,2 | s1 | 34abS | 113 | 1 |
| 38) | 63,62 | 191,2 | s1 | 34abR | 102 | 1 |
| 39) | 64,88 | 191,2 | s1 | 35abS | 89 | 1 |
| 40) | 65,60 | 191,2 | s1 | 35abR | 96 | 1 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
| Steranes: | | | | | | |
| 41) | 38,61 | 217,2 | s3 | 21aa | 36 | 0 |
| 42) | 40,27 | 217,2 | s3 | 21bb | 114 | 1 |
| 43) | 40,40 | 217,2 | s3 | 22aa | 30 | 0 |
| 44) | 42,62 | 217,2 | s3 | 22bb | 69 | 1 |
| 45) | 48,96 | 217,2 | s3 | 27dbS | 100 | 1 |
| 46) | 49,61 | 217,2 | s3 | 27dbR | 67 | 1 |
| 47) | 51,95 | 218,2 | s3 | 27bbR | 259 | 3 |
| 48) | 52,10 | 218,2 | s3 | 27bbS | 184 | 2 |
| 49) | 52,51 | 217,2 | s3 | 27aaR | 140 | 2 |
| 50) | 53,71 | 218,2 | s3 | 28bbR | 131 | 2 |
| 51) | 53,83 | 218,2 | s3 | 28bbS | 137 | 2 |
| 52) | 54,81 | 217,2 | s3 | 29aaS | 94 | 1 |
| 53) | 55,12 | 218,2 | s3 | 29bbR | 258 | 3 |
| 54) | 55,22 | 218,2 | s3 | 29bbS | 234 | 3 |
| 55) | 55,84 | 217,2 | s3 | 29aaR | 180 | 2 |
| 56) | 56,31 | 218,2 | s3 | 30bbR | 23 | 0 |
| 57) | 56,35 | 218,2 | s3 | 30bbS | 29 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973

Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1843S.D
Sample name: 31/5-6 swc, 1843s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 8
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 2:18

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|--------|-----|-----------|--------|--------|
| Internal standard (if added) | | | | | | |
| 1) | 36.44 | 217.2 | | 24baa | 1222 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34.07 | 191.2 | s1 | 19/3 | 16 | 0 |
| 3) | 36.06 | 191.2 | s1 | 20/3 | 10 | 0 |
| 4) | 38.09 | 191.2 | s1 | 21/3 | 14 | 0 |
| 5) | 42.08 | 191.2 | s1 | 23/3 | 57 | 1 |
| 6) | 43.20 | 191.2 | s1 | 24/3 | 22 | 0 |
| 7) | 45.47 | 191.2 | s1 | 25/3 | 15 | 0 |
| 8) | 47.01 | 191.2 | s1 | 24/4 | 74 | 1 |
| 9) | 47.16 | 191.2 | s1 | 26/3R | 10 | 0 |
| 10) | 47.26 | 191.2 | s1 | 26/3S | 9 | 0 |
| 11) | 50.78 | 191.2 | s1 | 28/3R | 12 | 0 |
| 12) | 51.04 | 191.2 | s1 | 28/3S | 11 | 0 |
| 13) | 51.82 | 191.2 | s1 | 29/3R | 9 | 0 |
| 14) | 52.11 | 191.2 | s1 | 29/3S | 8 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52.99 | 191.2 | s1 | 27Ts | 64 | 1 |
| 16) | 53.25 | 177.15 | s1 | 25nor28ab | 14 | 0 |
| 17) | 53.65 | 191.2 | s1 | 27Tm | 130 | 2 |
| 18) | 54.02 | 177.15 | s1 | 25nor29ab | 30 | 0 |
| 19) | 54.16 | 191.2 | s1 | 27b | 40 | 1 |
| 20) | 55.19 | 191.2 | s1 | 28ab | 50 | 1 |
| 21) | 55.42 | 177.15 | s1 | 25nor30ab | 11 | 0 |
| 22) | 55.92 | 191.2 | s1 | 29ab | 286 | 4 |
| 23) | 56.04 | 191.2 | s1 | 29Ts | 55 | 1 |
| 24) | 56.29 | 191.2 | s1 | 30D | 14 | 0 |
| 25) | 56.75 | 191.2 | s1 | 29ba | 24 | 0 |
| 26) | 57.30 | 191.2 | s2 | 30ab | 231 | 2 |
| 27) | 57.66 | 191.2 | s1 | 30D13 | 14 | 0 |
| 28) | 57.93 | 191.2 | s2 | 30ba | 21 | 0 |
| 29) | 58.88 | 191.2 | s1 | 31abS | 91 | 1 |
| 30) | 59.09 | 191.2 | s1 | 31abR | 73 | 1 |
| 31) | 59.43 | 191.2 | s1 | 30G | 7 | 0 |
| 32) | 59.62 | 191.2 | s1 | 31ba | 16 | 0 |
| 33) | 60.13 | 191.2 | s1 | 32abS | 44 | 1 |
| 34) | 60.39 | 191.2 | s1 | 32abR | 47 | 1 |
| 35) | 61.56 | 191.2 | s1 | 33abS | 30 | 0 |
| 36) | 61.93 | 191.2 | s1 | 33abR | 26 | 0 |
| 37) | 63.10 | 191.2 | s1 | 34abS | 22 | 0 |
| 38) | 63.63 | 191.2 | s1 | 34abR | 17 | 0 |
| 39) | 64.89 | 191.2 | s1 | 35abS | 24 | 0 |
| 40) | 65.63 | 191.2 | s1 | 35abR | 16 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|-----------|---------|-------|-----|-------|--------|--------|
| Steranes: | | | | | | |
| 41) | 38.61 | 217.2 | s3 | 21aa | 11 | 0 |
| 42) | 40.27 | 217.2 | s3 | 21bb | 28 | 1 |
| 43) | 40.38 | 217.2 | s3 | 22aa | 7 | 0 |
| 44) | 42.63 | 217.2 | s3 | 22bb | 21 | 0 |
| 45) | 48.96 | 217.2 | s3 | 27dbS | 28 | 1 |
| 46) | 49.58 | 217.2 | s3 | 27dbR | 16 | 0 |
| 47) | 51.94 | 218.2 | s3 | 27bbR | 53 | 1 |
| 48) | 52.11 | 218.2 | s3 | 27bbS | 39 | 1 |
| 49) | 52.50 | 217.2 | s3 | 27aaR | 26 | 1 |
| 50) | 53.69 | 218.2 | s3 | 28bbR | 23 | 0 |
| 51) | 53.83 | 218.2 | s3 | 28bbS | 24 | 1 |
| 52) | 54.81 | 217.2 | s3 | 29aaS | 18 | 0 |
| 53) | 55.12 | 218.2 | s3 | 29bbR | 37 | 1 |
| 54) | 55.22 | 218.2 | s3 | 29bbS | 40 | 1 |
| 55) | 55.83 | 217.2 | s3 | 29aaR | 21 | 0 |
| 56) | 56.31 | 218.2 | s3 | 30bbR | 5 | 0 |
| 57) | 56.37 | 218.2 | s3 | 30bbS | 5 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|---------------------|---------|--------|-----|-----------|--------|-----------------|
| 4 | 46.43 | 247.2 | | 245aa | 1856 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34,07 | 191,2 | s1 | 19/3 | 39 | 0 |
| 3) | 36,00 | 191,2 | s1 | 20/3 | 44 | 0 |
| 4) | 38,10 | 191,2 | s1 | 21/3 | 39 | 0 |
| 5) | 42,08 | 191,2 | s1 | 23/3 | 118 | 1 |
| 6) | 43,20 | 191,2 | s1 | 24/3 | 57 | 1 |
| 7) | 45,46 | 191,2 | s1 | 25/3 | 33 | 0 |
| 8) | 47,02 | 191,2 | s1 | 24/4 | 132 | 1 |
| 9) | 47,11 | 191,2 | s1 | 26/3R | 20 | 0 |
| 10) | 47,25 | 191,2 | s1 | 26/3S | 26 | 0 |
| 11) | 50,78 | 191,2 | s1 | 28/3R | 30 | 0 |
| 12) | 51,03 | 191,2 | s1 | 28/3S | 19 | 0 |
| 13) | 51,83 | 191,2 | s1 | 29/3R | 21 | 0 |
| 14) | 52,11 | 191,2 | s1 | 29/3S | 35 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52,98 | 191,2 | s1 | 27Ts | 117 | 1 |
| 16) | 53,25 | 177,15 | s1 | 25nor28ab | 25 | 0 |
| 17) | 53,66 | 191,2 | s1 | 27Tm | 280 | 3 |
| 18) | 54,03 | 177,15 | s1 | 25nor29ab | 41 | 0 |
| 19) | 54,14 | 191,2 | s1 | 27b | 91 | 1 |
| 20) | 55,19 | 191,2 | s1 | 28ab | 87 | 1 |
| 21) | 55,43 | 177,15 | s1 | 25nor30ab | 20 | 0 |
| 22) | 55,93 | 191,2 | s1 | 29ab | 727 | 7 |
| 23) | 56,03 | 191,2 | s1 | 29Ts | 124 | 1 |
| 24) | 56,26 | 191,2 | s1 | 30D | 36 | 0 |
| 25) | 56,73 | 191,2 | s1 | 29ba | 120 | 1 |
| 26) | 57,30 | 191,2 | s2 | 30ab | 673 | 4 |
| 27) | 57,66 | 191,2 | s1 | 30D13 | 122 | 1 |
| 28) | 57,93 | 191,2 | s2 | 30ba | 105 | 1 |
| 29) | 58,90 | 191,2 | s1 | 31abS | 254 | 2 |
| 30) | 59,09 | 191,2 | s1 | 31abR | 308 | 3 |
| 31) | 59,43 | 191,2 | s1 | 30G | 50 | 0 |
| 32) | 59,60 | 191,2 | s1 | 31ba | 98 | 1 |
| 33) | 60,13 | 191,2 | s1 | 32abS | 127 | 1 |
| 34) | 60,40 | 191,2 | s1 | 32abR | 148 | 1 |
| 35) | 61,56 | 191,2 | s1 | 33abS | 80 | 1 |
| 36) | 61,94 | 191,2 | s1 | 33abR | 84 | 1 |
| 37) | 63,10 | 191,2 | s1 | 34abS | 50 | 0 |
| 38) | 63,63 | 191,2 | s1 | 34abR | 47 | 0 |
| 39) | 64,89 | 191,2 | s1 | 35abS | 22 | 0 |
| 40) | 65,61 | 191,2 | s1 | 35abR | 26 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1972S.D
Sample name: 31/5-6 swc, 1972s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 9
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 3:46

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------|---------|-------|-----|-------|--------|-----------------|
| Steranes: | | | | | | |
| 41) | 38,61 | 217,2 | s3 | 21aa | 33 | 0 |
| 42) | 40,27 | 217,2 | s3 | 21bb | 75 | 1 |
| 43) | 40,39 | 217,2 | s3 | 22aa | 31 | 0 |
| 44) | 42,63 | 217,2 | s3 | 22bb | 56 | 1 |
| 45) | 48,97 | 217,2 | s3 | 27dbS | 99 | 1 |
| 46) | 49,60 | 217,2 | s3 | 27dbR | 62 | 1 |
| 47) | 51,94 | 218,2 | s3 | 27bbR | 134 | 2 |
| 48) | 52,10 | 218,2 | s3 | 27bbS | 82 | 1 |
| 49) | 52,50 | 217,2 | s3 | 27aaR | 74 | 1 |
| 50) | 53,70 | 218,2 | s3 | 28bbR | 60 | 1 |
| 51) | 53,84 | 218,2 | s3 | 28bbS | 71 | 1 |
| 52) | 54,81 | 217,2 | s3 | 29aaS | 48 | 1 |
| 53) | 55,12 | 218,2 | s3 | 29bbR | 132 | 2 |
| 54) | 55,23 | 218,2 | s3 | 29bbS | 112 | 1 |
| 55) | 55,84 | 217,2 | s3 | 29aaR | 103 | 1 |
| 56) | 56,33 | 218,2 | s3 | 30bbR | 13 | 0 |
| 57) | 56,35 | 218,2 | s3 | 30bbS | 15 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|---------------------|---------|--------|-----|-----------|--------|-----------------|
| Diterpanes: | | | | | | |
| 2) | 34,09 | 191,2 | s1 | 19/3 | 19 | 0 |
| 3) | 36,05 | 191,2 | s1 | 20/3 | 24 | 0 |
| 4) | 38,10 | 191,2 | s1 | 21/3 | 29 | 1 |
| 5) | 42,08 | 191,2 | s1 | 23/3 | 130 | 2 |
| 6) | 43,21 | 191,2 | s1 | 24/3 | 53 | 1 |
| 7) | 45,47 | 191,2 | s1 | 25/3 | 29 | 1 |
| 8) | 47,03 | 191,2 | s1 | 24/4 | 207 | 4 |
| 9) | 47,10 | 191,2 | s1 | 26/3R | 22 | 0 |
| 10) | 47,25 | 191,2 | s1 | 26/3S | 22 | 0 |
| 11) | 50,78 | 191,2 | s1 | 28/3R | 25 | 0 |
| 12) | 51,02 | 191,2 | s1 | 28/3S | 20 | 0 |
| 13) | 51,81 | 191,2 | s1 | 29/3R | 21 | 0 |
| 14) | 52,12 | 191,2 | s1 | 29/3S | 20 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52,98 | 191,2 | s1 | 27Ts | 157 | 3 |
| 16) | 53,25 | 177,15 | s1 | 25nor28ab | 13 | 0 |
| 17) | 53,66 | 191,2 | s1 | 27Tm | 436 | 8 |
| 18) | 54,04 | 177,15 | s1 | 25nor29ab | 20 | 0 |
| 19) | 54,15 | 191,2 | s1 | 27b | 167 | 3 |
| 20) | 55,22 | 191,2 | s1 | 28ab | 11 | 0 |
| 21) | 55,44 | 177,15 | s1 | 25nor30ab | 12 | 0 |
| 22) | 55,93 | 191,2 | s1 | 29ab | 1386 | 24 |
| 23) | 56,03 | 191,2 | s1 | 29Ts | 160 | 3 |
| 24) | 56,30 | 191,2 | s1 | 30D | 13 | 0 |
| 25) | 56,74 | 191,2 | s1 | 29ba | 89 | 2 |
| 26) | 57,30 | 191,2 | s2 | 30ab | 996 | 11 |
| 27) | 57,65 | 191,2 | s1 | 30D13 | 35 | 1 |
| 28) | 57,94 | 191,2 | s2 | 30ba | 63 | 1 |
| 29) | 58,89 | 191,2 | s1 | 31abS | 463 | 8 |
| 30) | 59,09 | 191,2 | s1 | 31abR | 340 | 6 |
| 31) | 59,43 | 191,2 | s1 | 30G | 82 | 1 |
| 32) | 59,62 | 191,2 | s1 | 31ba | 38 | 1 |
| 33) | 60,13 | 191,2 | s1 | 32abS | 232 | 4 |
| 34) | 60,40 | 191,2 | s1 | 32abR | 144 | 3 |
| 35) | 61,58 | 191,2 | s1 | 33abS | 123 | 2 |
| 36) | 61,94 | 191,2 | s1 | 33abR | 86 | 2 |
| 37) | 63,11 | 191,2 | s1 | 34abS | 57 | 1 |
| 38) | 63,62 | 191,2 | s1 | 34abR | 40 | 1 |
| 39) | 64,87 | 191,2 | s1 | 35abS | 36 | 1 |
| 40) | 65,61 | 191,2 | s1 | 35abR | 24 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 2015S.D
Sample name: 31/5-6 swc, 2015s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 10
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 5:14

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------|---------|-------|-----|-------|--------|-----------------|
| Steranes: | | | | | | |
| 41) | 38,60 | 217,2 | s3 | 21aa | 17 | 0 |
| 42) | 40,27 | 217,2 | s3 | 21bb | 71 | 2 |
| 43) | 40,40 | 217,2 | s3 | 22aa | 14 | 0 |
| 44) | 42,63 | 217,2 | s3 | 22bb | 45 | 1 |
| 45) | 48,95 | 217,2 | s3 | 27dbS | 43 | 1 |
| 46) | 49,59 | 217,2 | s3 | 27dbR | 24 | 1 |
| 47) | 51,95 | 218,2 | s3 | 27bbR | 138 | 4 |
| 48) | 52,10 | 218,2 | s3 | 27bbS | 110 | 3 |
| 49) | 52,51 | 217,2 | s3 | 27aaR | 71 | 2 |
| 50) | 53,71 | 218,2 | s3 | 28bbR | 73 | 2 |
| 51) | 53,84 | 218,2 | s3 | 28bbS | 70 | 2 |
| 52) | 54,81 | 217,2 | s3 | 29aaS | 56 | 1 |
| 53) | 55,13 | 218,2 | s3 | 29bbR | 132 | 3 |
| 54) | 55,22 | 218,2 | s3 | 29bbS | 122 | 3 |
| 55) | 55,84 | 217,2 | s3 | 29aaR | 50 | 1 |
| 56) | 56,30 | 218,2 | s3 | 30bbR | 11 | 0 |
| 57) | 56,34 | 218,2 | s3 | 30bbS | 17 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|---------------------|---------|--------|-----|-----------|--------|--------|
| | | | | | ng/mg | |
| Diterpanes: | | | | | | |
| 2) | 34,07 | 191,2 | s1 | 19/3 | 13 | 0 |
| 3) | 36,05 | 191,2 | s1 | 20/3 | 20 | 1 |
| 4) | 38,10 | 191,2 | s1 | 21/3 | 28 | 1 |
| 5) | 42,07 | 191,2 | s1 | 23/3 | 75 | 2 |
| 6) | 43,21 | 191,2 | s1 | 24/3 | 41 | 1 |
| 7) | 45,51 | 191,2 | s1 | 25/3 | 22 | 1 |
| 8) | 47,03 | 191,2 | s1 | 24/4 | 116 | 3 |
| 9) | 47,13 | 191,2 | s1 | 26/3R | 18 | 0 |
| 10) | 47,26 | 191,2 | s1 | 26/3S | 11 | 0 |
| 11) | 50,78 | 191,2 | s1 | 28/3R | 14 | 0 |
| 12) | 51,04 | 191,2 | s1 | 28/3S | 12 | 0 |
| 13) | 51,83 | 191,2 | s1 | 29/3R | 15 | 0 |
| 14) | 52,11 | 191,2 | s1 | 29/3S | 15 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52,99 | 191,2 | s1 | 27Ts | 71 | 2 |
| 16) | 53,22 | 177,15 | s1 | 25nor28ab | 18 | 0 |
| 17) | 53,67 | 191,2 | s1 | 27Tm | 349 | 9 |
| 18) | 54,04 | 177,15 | s1 | 25nor29ab | 18 | 0 |
| 19) | 54,14 | 191,2 | s1 | 27b | 62 | 2 |
| 20) | 55,19 | 191,2 | s1 | 28ab | 947 | 26 |
| 21) | 55,45 | 177,15 | s1 | 25nor30ab | 10 | 0 |
| 22) | 55,92 | 191,2 | s1 | 29ab | 572 | 15 |
| 23) | 56,03 | 191,2 | s1 | 29Ts | 63 | 2 |
| 24) | 56,29 | 191,2 | s1 | 30D | 20 | 1 |
| 25) | 56,73 | 191,2 | s1 | 29ba | 136 | 4 |
| 26) | 57,30 | 191,2 | s2 | 30ab | 544 | 9 |
| 27) | 57,66 | 191,2 | s1 | 30D13 | 51 | 1 |
| 28) | 57,92 | 191,2 | s2 | 30ba | 199 | 3 |
| 29) | 58,90 | 191,2 | s1 | 31abS | 217 | 6 |
| 30) | 59,09 | 191,2 | s1 | 31abR | 338 | 9 |
| 31) | 59,43 | 191,2 | s1 | 30G | 17 | 0 |
| 32) | 59,62 | 191,2 | s1 | 31ba | 165 | 4 |
| 33) | 60,13 | 191,2 | s1 | 32abS | 58 | 2 |
| 34) | 60,40 | 191,2 | s1 | 32abR | 109 | 3 |
| 35) | 61,54 | 191,2 | s1 | 33abS | 39 | 1 |
| 36) | 61,93 | 191,2 | s1 | 33abR | 34 | 1 |
| 37) | 63,12 | 191,2 | s1 | 34abS | 18 | 0 |
| 38) | 63,64 | 191,2 | s1 | 34abR | 26 | 1 |
| 39) | 64,88 | 191,2 | s1 | 35abS | 7 | 0 |
| 40) | 65,62 | 191,2 | s1 | 35abR | 16 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 2180S.D
Sample name: 31/5-6 swc, 2180s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 11
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 6:42

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
| | | | | | ng/mg | |
| Steranes: | | | | | | |
| 41) | 38,61 | 217,2 | s3 | 21aa | 11 | 0 |
| 42) | 40,28 | 217,2 | s3 | 21bb | 42 | 2 |
| 43) | 40,40 | 217,2 | s3 | 22aa | 12 | 0 |
| 44) | 42,62 | 217,2 | s3 | 22bb | 30 | 1 |
| 45) | 48,96 | 217,2 | s3 | 27dbS | 34 | 1 |
| 46) | 49,60 | 217,2 | s3 | 27dbR | 24 | 1 |
| 47) | 51,95 | 218,2 | s3 | 27bbR | 60 | 2 |
| 48) | 52,09 | 218,2 | s3 | 27bbS | 45 | 2 |
| 49) | 52,50 | 217,2 | s3 | 27aaR | 49 | 2 |
| 50) | 53,70 | 218,2 | s3 | 28bbR | 30 | 1 |
| 51) | 53,84 | 218,2 | s3 | 28bbS | 31 | 1 |
| 52) | 54,82 | 217,2 | s3 | 29aaS | 19 | 1 |
| 53) | 55,13 | 218,2 | s3 | 29bbR | 54 | 2 |
| 54) | 55,22 | 218,2 | s3 | 29bbS | 50 | 2 |
| 55) | 55,83 | 217,2 | s3 | 29aaR | 40 | 2 |
| 56) | 56,31 | 218,2 | s3 | 30bbR | 6 | 0 |
| 57) | 56,35 | 218,2 | s3 | 30bbS | 8 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------------------|---------|--------|-----|-----------|--------|-----------------|
| Internal standard (if added) | | | | | | |
| 1) | 46.43 | 217.2 | | 24baa | 2219 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34.07 | 191.2 | s1 | 19/3 | 10 | 0 |
| 3) | 36.05 | 191.2 | s1 | 20/3 | 6 | 0 |
| 4) | 38.09 | 191.2 | s1 | 21/3 | 9 | 0 |
| 5) | 42.07 | 191.2 | s1 | 23/3 | 38 | 0 |
| 6) | 43.19 | 191.2 | s1 | 24/3 | 16 | 0 |
| 7) | 45.46 | 191.2 | s1 | 25/3 | 10 | 0 |
| 8) | 47.02 | 191.2 | s1 | 24/4 | 51 | 0 |
| 9) | 47.11 | 191.2 | s1 | 26/3R | 7 | 0 |
| 10) | 47.26 | 191.2 | s1 | 26/3S | 8 | 0 |
| 11) | 50.76 | 191.2 | s1 | 28/3R | 11 | 0 |
| 12) | 51.04 | 191.2 | s1 | 28/3S | 7 | 0 |
| 13) | 51.80 | 191.2 | s1 | 29/3R | 11 | 0 |
| 14) | 52.10 | 191.2 | s1 | 29/3S | 11 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52.99 | 191.2 | s1 | 27Ts | 43 | 0 |
| 16) | 53.23 | 177.15 | s1 | 25nor28ab | 6 | 0 |
| 17) | 53.65 | 191.2 | s1 | 27Tm | 119 | 1 |
| 18) | 54.02 | 177.15 | s1 | 25nor29ab | 2 | 0 |
| 19) | 54.15 | 191.2 | s1 | 27b | 34 | 0 |
| 20) | 55.19 | 191.2 | s1 | 28ab | 14 | 0 |
| 21) | 55.42 | 177.15 | s1 | 25nor30ab | 11 | 0 |
| 22) | 55.92 | 191.2 | s1 | 29ab | 283 | 2 |
| 23) | 56.01 | 191.2 | s1 | 29Ts | 42 | 0 |
| 24) | 56.28 | 191.2 | s1 | 30D | 13 | 0 |
| 25) | 56.71 | 191.2 | s1 | 29ba | 33 | 0 |
| 26) | 57.30 | 191.2 | s2 | 30ab | 229 | 1 |
| 27) | 57.65 | 191.2 | s1 | 30D13 | 18 | 0 |
| 28) | 57.92 | 191.2 | s2 | 30ba | 30 | 0 |
| 29) | 58.90 | 191.2 | s1 | 31abS | 96 | 1 |
| 30) | 59.09 | 191.2 | s1 | 31abR | 78 | 1 |
| 31) | 59.42 | 191.2 | s1 | 30G | 15 | 0 |
| 32) | 59.61 | 191.2 | s1 | 31ba | 19 | 0 |
| 33) | 60.13 | 191.2 | s1 | 32abS | 44 | 0 |
| 34) | 60.40 | 191.2 | s1 | 32abR | 49 | 0 |
| 35) | 61.54 | 191.2 | s1 | 33abS | 29 | 0 |
| 36) | 61.93 | 191.2 | s1 | 33abR | 23 | 0 |
| 37) | 63.10 | 191.2 | s1 | 34abS | 18 | 0 |
| 38) | 63.61 | 191.2 | s1 | 34abR | 11 | 0 |
| 39) | 64.89 | 191.2 | s1 | 35abS | 17 | 0 |
| 40) | 65.61 | 191.2 | s1 | 35abR | 20 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 2220S.D
Sample name: 31/5-6 swc, 2220s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 12
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 8:10

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------|---------|-------|-----|-------|--------|-----------------|
| Steranes: | | | | | | |
| 41) | 38.59 | 217.2 | s3 | 21aa | 7 | 0 |
| 42) | 40.27 | 217.2 | s3 | 21bb | 19 | 0 |
| 43) | 40.40 | 217.2 | s3 | 22aa | 8 | 0 |
| 44) | 42.62 | 217.2 | s3 | 22bb | 15 | 0 |
| 45) | 48.95 | 217.2 | s3 | 27dbS | 21 | 0 |
| 46) | 49.60 | 217.2 | s3 | 27dbR | 14 | 0 |
| 47) | 51.96 | 218.2 | s3 | 27bbR | 37 | 0 |
| 48) | 52.10 | 218.2 | s3 | 27bbS | 28 | 0 |
| 49) | 52.50 | 217.2 | s3 | 27aaR | 17 | 0 |
| 50) | 53.71 | 218.2 | s3 | 28bbR | 22 | 0 |
| 51) | 53.84 | 218.2 | s3 | 28bbS | 18 | 0 |
| 52) | 54.83 | 217.2 | s3 | 29aaS | 13 | 0 |
| 53) | 55.13 | 218.2 | s3 | 29bbR | 30 | 0 |
| 54) | 55.23 | 218.2 | s3 | 29bbS | 28 | 0 |
| 55) | 55.85 | 217.2 | s3 | 29aaR | 15 | 0 |
| 56) | 56.31 | 218.2 | s3 | 30bbR | 5 | 0 |
| 57) | 56.34 | 218.2 | s3 | 30bbS | 7 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------------------|---------|--------|-----|-----------|--------|-----------------|
| Internal standard (if added) | | | | | | |
| 1) | 26.43 | 217.2 | s1 | 24baa | 1976 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34.07 | 191.2 | s1 | 19/3 | 6 | 0 |
| 3) | 36.05 | 191.2 | s1 | 20/3 | 10 | 0 |
| 4) | 38.11 | 191.2 | s1 | 21/3 | 14 | 0 |
| 5) | 42.08 | 191.2 | s1 | 23/3 | 61 | 1 |
| 6) | 43.20 | 191.2 | s1 | 24/3 | 33 | 0 |
| 7) | 45.48 | 191.2 | s1 | 25/3 | 18 | 0 |
| 8) | 47.02 | 191.2 | s1 | 24/4 | 82 | 1 |
| 9) | 47.11 | 191.2 | s1 | 26/3R | 13 | 0 |
| 10) | 47.25 | 191.2 | s1 | 26/3S | 16 | 0 |
| 11) | 50.78 | 191.2 | s1 | 28/3R | 15 | 0 |
| 12) | 51.03 | 191.2 | s1 | 28/3S | 12 | 0 |
| 13) | 51.83 | 191.2 | s1 | 29/3R | 10 | 0 |
| 14) | 52.11 | 191.2 | s1 | 29/3S | 14 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52.97 | 191.2 | s1 | 27Ts | 60 | 1 |
| 16) | 53.26 | 177.15 | s1 | 25nor28ab | 7 | 0 |
| 17) | 53.66 | 191.2 | s1 | 27Tm | 136 | 1 |
| 18) | 54.03 | 177.15 | s1 | 25nor29ab | 23 | 0 |
| 19) | 54.16 | 191.2 | s1 | 27b | 44 | 0 |
| 20) | 55.23 | 191.2 | s1 | 28ab | 16 | 0 |
| 21) | 55.42 | 177.15 | s1 | 25nor30ab | 13 | 0 |
| 22) | 55.93 | 191.2 | s1 | 29ab | 304 | 3 |
| 23) | 56.03 | 191.2 | s1 | 29Ts | 52 | 0 |
| 24) | 56.27 | 191.2 | s1 | 30D | 14 | 0 |
| 25) | 56.73 | 191.2 | s1 | 29ba | 25 | 0 |
| 26) | 57.30 | 191.2 | s2 | 30ab | 213 | 1 |
| 27) | 57.64 | 191.2 | s1 | 30D13 | 10 | 0 |
| 28) | 57.92 | 191.2 | s2 | 30ba | 21 | 0 |
| 29) | 58.88 | 191.2 | s1 | 31abS | 87 | 1 |
| 30) | 59.10 | 191.2 | s1 | 31abR | 63 | 1 |
| 31) | 59.44 | 191.2 | s1 | 30G | 15 | 0 |
| 32) | 59.62 | 191.2 | s1 | 31ba | 15 | 0 |
| 33) | 60.12 | 191.2 | s1 | 32abS | 38 | 0 |
| 34) | 60.39 | 191.2 | s1 | 32abR | 32 | 0 |
| 35) | 61.57 | 191.2 | s1 | 33abS | 23 | 0 |
| 36) | 61.93 | 191.2 | s1 | 33abR | 25 | 0 |
| 37) | 63.11 | 191.2 | s1 | 34abS | 19 | 0 |
| 38) | 63.61 | 191.2 | s1 | 34abR | 18 | 0 |
| 39) | 64.91 | 191.2 | s1 | 35abS | 12 | 0 |
| 40) | 65.63 | 191.2 | s1 | 35abR | 13 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 2280S.D
Sample name: 31/5-6 swc, 2280s
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 13
Method: MSD_S_E2
Operator: Marian
Date: 30 Aug 2000 9:38

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount ng/mg |
|------------------|---------|-------|-----|-------|--------|-----------------|
| Steranes: | | | | | | |
| 41) | 38.61 | 217.2 | s3 | 21aa | 8 | 0 |
| 42) | 40.27 | 217.2 | s3 | 21bb | 25 | 0 |
| 43) | 40.38 | 217.2 | s3 | 22aa | 9 | 0 |
| 44) | 42.63 | 217.2 | s3 | 22bb | 20 | 0 |
| 45) | 48.96 | 217.2 | s3 | 27dbS | 31 | 0 |
| 46) | 49.60 | 217.2 | s3 | 27dbR | 19 | 0 |
| 47) | 51.94 | 218.2 | s3 | 27bbR | 53 | 1 |
| 48) | 52.10 | 218.2 | s3 | 27bbS | 42 | 1 |
| 49) | 52.51 | 217.2 | s3 | 27aaR | 28 | 0 |
| 50) | 53.71 | 218.2 | s3 | 28bbR | 29 | 0 |
| 51) | 53.84 | 218.2 | s3 | 28bbS | 30 | 0 |
| 52) | 54.80 | 217.2 | s3 | 29aaS | 20 | 0 |
| 53) | 55.13 | 218.2 | s3 | 29bbR | 36 | 0 |
| 54) | 55.21 | 218.2 | s3 | 29bbS | 38 | 1 |
| 55) | 55.84 | 217.2 | s3 | 29aaR | 17 | 0 |
| 56) | 56.31 | 218.2 | s3 | 30bbR | 7 | 0 |
| 57) | 56.35 | 218.2 | s3 | 30bbS | 3 | 0 |

31-5-6-3

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|--------|-----|-----------|--------|--------|
| Internal standard (if added) | | | | | | |
| 1) | 46.43 | 217.2 | | 24baa | 2360 | 20 |
| Diterpanes: | | | | | | |
| 2) | 34.06 | 191.2 | s1 | 19/3 | 3 | 0 |
| 3) | 36.06 | 191.2 | s1 | 20/3 | 4 | 0 |
| 4) | 38.09 | 191.2 | s1 | 21/3 | 9 | 0 |
| 5) | 42.07 | 191.2 | s1 | 23/3 | 61 | 0 |
| 6) | 43.20 | 191.2 | s1 | 24/3 | 35 | 0 |
| 7) | 45.49 | 191.2 | s1 | 25/3 | 26 | 0 |
| 8) | 47.03 | 191.2 | s1 | 24/4 | 82 | 1 |
| 9) | 47.12 | 191.2 | s1 | 26/3R | 17 | 0 |
| 10) | 47.25 | 191.2 | s1 | 26/3S | 17 | 0 |
| 11) | 50.78 | 191.2 | s1 | 28/3R | 20 | 0 |
| 12) | 51.03 | 191.2 | s1 | 28/3S | 19 | 0 |
| 13) | 51.83 | 191.2 | s1 | 29/3R | 22 | 0 |
| 14) | 52.10 | 191.2 | s1 | 29/3S | 20 | 0 |
| Triterpanes: | | | | | | |
| 15) | 52.98 | 191.2 | s1 | 27Ts | 136 | 1 |
| 16) | 53.21 | 177.15 | s1 | 25nor28ab | 32 | 0 |
| 17) | 53.66 | 191.2 | s1 | 27Tm | 128 | 1 |
| 18) | 54.03 | 177.15 | s1 | 25nor29ab | 6 | 0 |
| 19) | 54.14 | 191.2 | s1 | 27b | 41 | 0 |
| 20) | 55.22 | 191.2 | s1 | 28ab | 46 | 0 |
| 21) | 55.44 | 177.15 | s1 | 25nor30ab | 9 | 0 |
| 22) | 55.92 | 191.2 | s1 | 29ab | 355 | 2 |
| 23) | 56.02 | 191.2 | s1 | 29Ts | 89 | 1 |
| 24) | 56.34 | 191.2 | s1 | 30D | 8 | 0 |
| 25) | 56.72 | 191.2 | s1 | 29ba | 26 | 0 |
| 26) | 57.31 | 191.2 | s2 | 30ab | 267 | 1 |
| 27) | 57.64 | 191.2 | s1 | 30D13 | 7 | 0 |
| 28) | 57.93 | 191.2 | s2 | 30ba | 21 | 0 |
| 29) | 58.89 | 191.2 | s1 | 31abS | 108 | 1 |
| 30) | 59.09 | 191.2 | s1 | 31abR | 80 | 1 |
| 31) | 59.42 | 191.2 | s1 | 30G | 11 | 0 |
| 32) | 59.62 | 191.2 | s1 | 31ba | 7 | 0 |
| 33) | 60.13 | 191.2 | s1 | 32abS | 53 | 0 |
| 34) | 60.39 | 191.2 | s1 | 32abR | 40 | 0 |
| 35) | 61.55 | 191.2 | s1 | 33abS | 32 | 0 |
| 36) | 61.94 | 191.2 | s1 | 33abR | 19 | 0 |
| 37) | 63.10 | 191.2 | s1 | 34abS | 16 | 0 |
| 38) | 63.60 | 191.2 | s1 | 34abR | 10 | 0 |
| 39) | 64.90 | 191.2 | s1 | 35abS | 9 | 0 |
| 40) | 65.62 | 191.2 | s1 | 35abR | 20 | 0 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: **MUDS.D**
 Sample name: **31/5-6 mud 19000m sat**
 Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
 Misc. info.:
 Vial no.: 27
 Method: MSD_S_E2
 Operator: Marian
 Date: 30 Aug 2000 11:06

Response curve y = ax
 Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|-----------|---------|-------|-----|-------|--------|--------|
| Steranes: | | | | | | |
| 41) | 38.61 | 217.2 | s3 | 21aa | 9 | 0 |
| 42) | 40.27 | 217.2 | s3 | 21bb | 19 | 0 |
| 43) | 40.39 | 217.2 | s3 | 22aa | 9 | 0 |
| 44) | 42.62 | 217.2 | s3 | 22bb | 19 | 0 |
| 45) | 48.95 | 217.2 | s3 | 27dbS | 99 | 1 |
| 46) | 49.59 | 217.2 | s3 | 27dbR | 55 | 1 |
| 47) | 51.95 | 218.2 | s3 | 27bbR | 110 | 1 |
| 48) | 52.10 | 218.2 | s3 | 27bbS | 86 | 1 |
| 49) | 52.50 | 217.2 | s3 | 27aaR | 41 | 0 |
| 50) | 53.71 | 218.2 | s3 | 28bbR | 48 | 0 |
| 51) | 53.85 | 218.2 | s3 | 28bbS | 54 | 1 |
| 52) | 54.83 | 217.2 | s3 | 29aaS | 30 | 0 |
| 53) | 55.13 | 218.2 | s3 | 29bbR | 79 | 1 |
| 54) | 55.22 | 218.2 | s3 | 29bbS | 74 | 1 |
| 55) | 55.83 | 217.2 | s3 | 29aaR | 23 | 0 |
| 56) | 56.29 | 218.2 | s3 | 30bbR | 12 | 0 |
| 57) | 56.36 | 218.2 | s3 | 30bbS | 14 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|----------------------------|---------|--------|-----|-----------|--------|--------|
| ng/mg | | | | | | |
| Normal standard (if added) | | | | | | |
| 1) | 36,47 | 217,2 | | 24baa | 1224 | 24 |
| Diterpanes: | | | | | | |
| 2) | 34,12 | 191,2 | s1 | 19/3 | 539 | 8 |
| 3) | 36,09 | 191,2 | s1 | 20/3 | 401 | 6 |
| 4) | 38,14 | 191,2 | s1 | 21/3 | 616 | 9 |
| 5) | 42,11 | 191,2 | s1 | 23/3 | 1317 | 20 |
| 6) | 43,23 | 191,2 | s1 | 24/3 | 754 | 11 |
| 7) | 45,50 | 191,2 | s1 | 25/3 | 429 | 6 |
| 8) | 47,05 | 191,2 | s1 | 24/4 | 691 | 10 |
| 9) | 47,15 | 191,2 | s1 | 26/3R | 270 | 4 |
| 10) | 47,28 | 191,2 | s1 | 26/3S | 291 | 4 |
| 11) | 50,81 | 191,2 | s1 | 28/3R | 330 | 5 |
| 12) | 51,06 | 191,2 | s1 | 28/3S | 287 | 4 |
| 13) | 51,84 | 191,2 | s1 | 29/3R | 499 | 7 |
| 14) | 52,14 | 191,2 | s1 | 29/3S | 447 | 7 |
| Triterpanes: | | | | | | |
| 15) | 53,01 | 191,2 | s1 | 27Ts | 2246 | 33 |
| 16) | 53,26 | 177,15 | s1 | 25nor28ab | 1946 | 29 |
| 17) | 53,69 | 191,2 | s1 | 27Tm | 1992 | 30 |
| 18) | 54,07 | 177,15 | s1 | 25nor29ab | 1056 | 16 |
| 19) | 54,15 | 191,2 | s1 | 27b | 416 | 6 |
| 20) | 55,25 | 191,2 | s1 | 28ab | 3111 | 46 |
| 21) | 55,47 | 177,15 | s1 | 25nor30ab | 949 | 14 |
| 22) | 55,96 | 191,2 | s1 | 29ab | 5352 | 80 |
| 23) | 56,06 | 191,2 | s1 | 29Ts | 2244 | 33 |
| 24) | 56,31 | 191,2 | s1 | 30D | 1399 | 21 |
| 25) | 56,75 | 191,2 | s1 | 29ba | 1120 | 17 |
| 26) | 57,34 | 191,2 | s2 | 30ab | 14818 | 142 |
| 27) | 57,67 | 191,2 | s1 | 30D13 | 813 | 12 |
| 28) | 57,96 | 191,2 | s2 | 30ba | 1452 | 14 |
| 29) | 58,92 | 191,2 | s1 | 31abS | 5100 | 76 |
| 30) | 59,11 | 191,2 | s1 | 31abR | 3926 | 58 |
| 31) | 59,45 | 191,2 | s1 | 30G | 713 | 11 |
| 32) | 59,64 | 191,2 | s1 | 31ba | 749 | 11 |
| 33) | 60,15 | 191,2 | s1 | 32abS | 3744 | 56 |
| 34) | 60,42 | 191,2 | s1 | 32abR | 2698 | 40 |
| 35) | 61,58 | 191,2 | s1 | 33abS | 3189 | 47 |
| 36) | 61,96 | 191,2 | s1 | 33abR | 2124 | 32 |
| 37) | 63,14 | 191,2 | s1 | 34abS | 1864 | 28 |
| 38) | 63,65 | 191,2 | s1 | 34abR | 1118 | 17 |
| 39) | 64,93 | 191,2 | s1 | 35abS | 1462 | 22 |
| 40) | 65,65 | 191,2 | s1 | 35abR | 939 | 14 |

Saturated biomarkers

GC/MS detection HP-6890/5973
Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: NSO1_03S.D
Sample name: nso1-ref sat
Data File Path: C:\HPCHEM\1\DATA\31_5_6_BIO\
Misc. info.:

Vial no.: 1
Method: MSD_S_E2
Operator: Marian
Date: 29 Aug 2000 16:01

Response curve y = ax
Response factor groups: s1...s3, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------|---------|-------|-----|-------|--------|--------|
| ng/mg | | | | | | |
| Steranes: | | | | | | |
| 41) | 38,64 | 217,2 | s3 | 21aa | 1107 | 24 |
| 42) | 40,30 | 217,2 | s3 | 21bb | 1457 | 31 |
| 43) | 40,42 | 217,2 | s3 | 22aa | 945 | 20 |
| 44) | 42,66 | 217,2 | s3 | 22bb | 913 | 20 |
| 45) | 48,99 | 217,2 | s3 | 27dbS | 2755 | 59 |
| 46) | 49,62 | 217,2 | s3 | 27dbR | 1635 | 35 |
| 47) | 51,98 | 218,2 | s3 | 27bbR | 2226 | 48 |
| 48) | 52,13 | 218,2 | s3 | 27bbS | 1515 | 33 |
| 49) | 52,53 | 217,2 | s3 | 27aaR | 811 | 17 |
| 50) | 53,73 | 218,2 | s3 | 28bbR | 1239 | 27 |
| 51) | 53,87 | 218,2 | s3 | 28bbS | 1542 | 33 |
| 52) | 54,86 | 217,2 | s3 | 29aaS | 918 | 20 |
| 53) | 55,15 | 218,2 | s3 | 29bbR | 1860 | 40 |
| 54) | 55,25 | 218,2 | s3 | 29bbS | 1763 | 38 |
| 55) | 55,86 | 217,2 | s3 | 29aaR | 855 | 18 |
| 56) | 56,34 | 218,2 | s3 | 30bbR | 711 | 15 |
| 57) | 56,38 | 218,2 | s3 | 30bbS | 607 | 13 |

APPENDIX IV

**Mass chromatograms, tabulated amounts and peak ratios
aromatic hydrocarbons, MSD data**

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|--------------------------------------|---------|-----|-----|-----------------|--------|--------|
| | | | | | | ng/mg |
| Internal standard (if added): | | | | | | |
| 14) | 10.38 | 136 | | d8N | 55231 | 48 |
| 16) | 19.65 | 164 | | d10BP | 40440 | 42 |
| 59) | 28.04 | 188 | | d10P | 80384 | 48 |
| 79) | 43.64 | 240 | | d12C | 42585 | 48 |
| Aryl isoprenoids: | | | | | | |
| 1) | 20.26 | 133 | 0 | C13AI | 210 | |
| 2) | 22.14 | 133 | 0 | C14AI | 123 | |
| 3) | 26.37 | 133 | 0 | C15AI | 53 | |
| 4) | 28.77 | 133 | 0 | C16AI | 169 | |
| 5) | 30.85 | 133 | 0 | C17AI | 153 | |
| 6) | 33.93 | 133 | 0 | C18AI | 91 | |
| 7) | 34.74 | 133 | 0 | C19AI | 141 | |
| 8) | 37.76 | 133 | 0 | C20AI | 48 | |
| 9) | 39.79 | 133 | 0 | C21AI | 65 | |
| 10) | 42.77 | 133 | 0 | C22AI | 155 | |
| 11) | 44.88 | 133 | 0 | C23AI | 1456 | |
| 12) | 55.74 | 133 | 0 | C30AI | 29 | |
| 13) | 56.80 | 133 | 0 | C31AI | 31 | |
| Naphthalenes: | | | | | | |
| 15) | 10.48 | 128 | a1 | N | 660993 | 525 |
| 17) | 13.97 | 142 | a2 | 2-MN | 990429 | 986 |
| 18) | 14.50 | 142 | a2 | 1-MN | 613223 | 611 |
| 19) | 17.08 | 156 | a3 | 2-EN | 52397 | 49 |
| 20) | 17.20 | 156 | a3 | 1-EN | 30425 | 28 |
| 21) | 17.42 | 156 | a3 | 2.6+2.7-DMN | 237527 | 222 |
| 22) | 17.89 | 156 | a3 | 1.3+1.7-DMN | 340193 | 318 |
| 23) | 17.99 | 156 | a3 | 1.6-DMN | 297994 | 278 |
| 24) | 18.47 | 156 | a3 | 2.3+1.4-DMN | 172300 | 161 |
| 25) | 18.57 | 156 | a3 | 1.5-DMN | 66270 | 62 |
| 26) | 18.93 | 156 | a3 | 1.2-DMN | 49940 | 47 |
| 27) | 20.63 | 170 | a4 | C3-N-1 | 9850 | 9 |
| 28) | 20.99 | 170 | a4 | C3-N-2 | 15867 | 15 |
| 29) | 21.11 | 170 | a4 | 1.3.7-TMN | 52368 | 50 |
| 30) | 21.26 | 170 | a4 | 1.3.6-TMN | 85519 | 81 |
| 31) | 21.72 | 170 | a4 | 1.3.5+1.4.6-TMN | 71635 | 68 |
| 32) | 21.81 | 170 | a4 | 2.3.6-TMN | 53873 | 51 |
| 33) | 22.22 | 170 | a4 | 1.6.7+1.2.7-TMN | 56168 | 53 |
| 34) | 22.28 | 170 | a4 | 1.2.6-TMN | 27656 | 26 |
| 35) | 22.71 | 170 | a4 | 1.2.4-TMN | 10073 | 10 |
| 36) | 22.91 | 170 | a4 | 1.2.5-TMN | 34790 | 33 |
| Biphenyls: | | | | | | |
| 37) | 16.65 | 154 | a5 | BP | 210510 | 138 |
| 38) | 19.93 | 168 | a5 | 3-MBP | 146510 | 96 |
| 39) | 20.18 | 168 | a5 | 4-MBP | 41410 | 27 |
| 40) | 20.24 | 182 | a4 | 2.3'-DMBP | 2642 | 3 |
| 41) | 20.45 | 182 | a4 | 2.5-DMBP | 1254 | 1 |
| 42) | 20.62 | 182 | a4 | 2.4+2.4'-DMBP | 1872 | 2 |
| 43) | 21.25 | 182 | a4 | 2.3-DMBP | 6939 | 7 |
| 44) | 22.62 | 182 | a4 | 3-EBP | 23376 | 22 |
| 45) | 22.96 | 182 | a4 | 3.5-DMBP | 11455 | 11 |
| 46) | 23.05 | 182 | a4 | 3.3'-DMBP | 28820 | 27 |
| 47) | 23.16 | 182 | a4 | 4-EBP | 3017 | 3 |
| 48) | 23.34 | 182 | a4 | 3.4'-DMBP | 15593 | 15 |
| 49) | 23.56 | 182 | a4 | 4.4'-DMBP | 2682 | 3 |
| 50) | 24.11 | 182 | a4 | 3.4-DMBP | 13669 | 13 |

Aromatic hydrocarbons

GC/MS detection HP-6890/5973

Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1798A.D
Sample name: 31/5-6 swc, 1798a
Data File Path: C:\HPCHEM\1\DATA\31_5_6\
Misc. info.:
Vial no.: 14
Method: MSD_A_E2
Operator: Marian
Date: 8/20/2000 3:47

Response curve: y = ax+b
Response factor groups: a1...a11, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|-----|-----|-----------------------|--------|--------|
| | | | | | | ng/mg |
| Dibenzofuranes: | | | | | | |
| 51) | 20.77 | 168 | a5 | DBF | 47253 | 31 |
| 52) | 23.87 | 182 | a4 | MDBF-1 | 48187 | 46 |
| 53) | 24.23 | 182 | a4 | MDBF-2 | 36962 | 35 |
| 54) | 24.52 | 182 | a4 | MDBF-3 | 24718 | 23 |
| Fluorenes: | | | | | | |
| 55) | 22.73 | 166 | a6 | F | 97605 | 77 |
| 56) | 25.98 | 180 | a6 | C1-F-1 | 20666 | 16 |
| 57) | 26.22 | 180 | a6 | C1-F-2 | 87760 | 70 |
| 58) | 26.52 | 180 | a6 | 1-MF | 12286 | 10 |
| Dibenzothiophenes: | | | | | | |
| 60) | 27.43 | 184 | a7 | DBT | 32758 | 6 |
| 61) | 30.06 | 198 | a7 | 4-MDBT | 19592 | 3 |
| 62) | 30.60 | 198 | a7 | 3+2-MDBT | 6183 | 1 |
| 63) | 31.17 | 198 | a7 | 1-MDBT | 5104 | 1 |
| Phenanthrenes: | | | | | | |
| 64) | 28.17 | 178 | a8 | P | 416915 | 208 |
| 65) | 31.13 | 192 | a9 | 3-MP | 51650 | 30 |
| 66) | 31.27 | 192 | a9 | 2-MP | 58992 | 35 |
| 67) | 31.76 | 192 | a9 | 9-MP | 137526 | 81 |
| 68) | 31.88 | 192 | a9 | 1-MP | 75811 | 44 |
| 69) | 33.86 | 206 | a10 | 2EP+9EP+3.6-DMP | 10641 | 6 |
| 70) | 34.10 | 206 | a10 | 1EP | 4116 | 2 |
| 71) | 34.20 | 206 | a10 | 2.6+2.7+3.5-DMP | 1923 | 1 |
| 72) | 34.55 | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 21572 | 12 |
| 73) | 34.69 | 206 | a10 | 1.6+2.5+2.9-DMP | 10151 | 6 |
| 74) | 34.83 | 206 | a10 | 1.7-DMP | 8495 | 5 |
| 75) | 34.98 | 206 | a10 | 2.3-DMP | 3493 | 2 |
| 76) | 35.09 | 206 | a10 | 1.9+4.9+4.10-DMP | 9500 | 5 |
| 77) | 35.39 | 206 | a10 | 1.8-DMP | 3903 | 2 |
| Retene: | | | | | | |
| 78) | 38.76 | 219 | a8 | Retene | 41452 | 21 |
| Triaromatic steroids: | | | | | | |
| 80) | 43.22 | 231 | a11 | 20TA | 239 | 0 |
| 81) | 45.17 | 231 | a11 | 21TA | 208 | 0 |
| 82) | 52.27 | 231 | a11 | S26TA | 134 | 0 |
| 83) | 53.50 | 231 | a11 | R26TA/S27TA | 330 | 0 |
| 84) | 54.50 | 231 | a11 | S28TA | 152 | 0 |
| 85) | 55.04 | 231 | a11 | R27TA | 200 | 0 |
| 86) | 56.30 | 231 | a11 | R28TA | 190 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|-------------------------------|---------|-----|-----|-----------------|--------|--------|
| | | | | | | ng/mg |
| Internal standard (if added): | | | | | | |
| 14) | 10.38 | 136 | | d8N | 13142 | 48 |
| 16) | 19.64 | 164 | | d10BP | 21312 | 42 |
| 59) | 28.02 | 188 | | d10P | 42980 | 48 |
| 79) | 43.60 | 240 | | d12C | 21762 | 48 |
| Aryl isoprenoids: | | | | | | |
| 1) | 20.26 | 133 | 0 | C13AI | 71 | |
| 2) | 22.13 | 133 | 0 | C14AI | 51 | |
| 3) | 26.51 | 133 | 0 | C15AI | 92 | |
| 4) | 28.72 | 133 | 0 | C16AI | 28 | |
| 5) | 30.83 | 133 | 0 | C17AI | 76 | |
| 6) | 33.71 | 133 | 0 | C18AI | 81 | |
| 7) | 34.74 | 133 | 0 | C19AI | 95 | |
| 8) | 37.66 | 133 | 0 | C20AI | 161 | |
| 9) | 39.76 | 133 | 0 | C21AI | 79 | |
| 10) | 42.74 | 133 | 0 | C22AI | 164 | |
| 11) | 44.85 | 133 | 0 | C23AI | 353 | |
| 12) | 55.72 | 133 | 0 | C30AI | 18 | |
| 13) | 56.77 | 133 | 0 | C31AI | 18 | |
| Naphthalenes: | | | | | | |
| 15) | 10.47 | 128 | a1 | N | 43766 | 146 |
| 17) | 13.94 | 142 | a2 | 2-MN | 121047 | 229 |
| 18) | 14.48 | 142 | a2 | 1-MN | 75020 | 142 |
| 19) | 17.07 | 156 | a3 | 2-EN | 10132 | 18 |
| 20) | 17.19 | 156 | a3 | 1-EN | 5546 | 10 |
| 21) | 17.40 | 156 | a3 | 2.6+2.7-DMN | 42235 | 75 |
| 22) | 17.87 | 156 | a3 | 1.3+1.7-DMN | 64931 | 115 |
| 23) | 17.96 | 156 | a3 | 1.6-DMN | 50312 | 89 |
| 24) | 18.46 | 156 | a3 | 2.3+1.4-DMN | 31851 | 56 |
| 25) | 18.55 | 156 | a3 | 1.5-DMN | 11995 | 21 |
| 26) | 18.92 | 156 | a3 | 1.2-DMN | 9825 | 17 |
| 27) | 20.62 | 170 | a4 | C3-N-1 | 2362 | 4 |
| 28) | 20.98 | 170 | a4 | C3-N-2 | 3534 | 6 |
| 29) | 21.10 | 170 | a4 | 1.3.7-TMN | 12252 | 22 |
| 30) | 21.24 | 170 | a4 | 1.3.6-TMN | 19102 | 34 |
| 31) | 21.71 | 170 | a4 | 1.3.5+1.4.6-TMN | 16918 | 30 |
| 32) | 21.79 | 170 | a4 | 2.3.6-TMN | 12124 | 22 |
| 33) | 22.21 | 170 | a4 | 1.6.7+1.2.7-TMN | 12589 | 23 |
| 34) | 22.24 | 170 | a4 | 1.2.6-TMN | 7067 | 13 |
| 35) | 22.70 | 170 | a4 | 1.2.4-TMN | 2170 | 4 |
| 36) | 22.90 | 170 | a4 | 1.2.5-TMN | 7615 | 14 |
| Biphenyls: | | | | | | |
| 37) | 16.64 | 154 | a5 | BP | 33489 | 42 |
| 38) | 19.91 | 168 | a5 | 3-MBP | 29178 | 36 |
| 39) | 20.17 | 168 | a5 | 4-MBP | 8989 | 11 |
| 40) | 20.24 | 182 | a4 | 2.3'-DMBP | 603 | 1 |
| 41) | 20.44 | 182 | a4 | 2.5-DMBP | 297 | 1 |
| 42) | 20.61 | 182 | a4 | 2.4+2.4'-DMBP | 452 | 1 |
| 43) | 21.24 | 182 | a4 | 2.3-DMBP | 1425 | 3 |
| 44) | 22.61 | 182 | a4 | 3-EBP | 4902 | 9 |
| 45) | 22.95 | 182 | a4 | 3.5-DMBP | 2767 | 5 |
| 46) | 23.04 | 182 | a4 | 3.3'-DMBP | 6796 | 12 |
| 47) | 23.15 | 182 | a4 | 4-EBP | 627 | 1 |
| 48) | 23.33 | 182 | a4 | 3.4'-DMBP | 3780 | 7 |
| 49) | 23.55 | 182 | a4 | 4.4'-DMBP | 673 | 1 |
| 50) | 24.10 | 182 | a4 | 3.4-DMBP | 2974 | 5 |

Aromatic hydrocarbons

GC/MS detection HP-6890/5973

Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: **1804A.D**
Sample name: **31/5-6 swc, 1804a**
Data File Path: C:\HPCHEM\1\DATA\31_5_6\
Misc. info.:
Vial no.: 15
Method: MSD_A_E2
Operator: Marian
Date: 8/20/2000 5:15

Response curve: y = ax+b
Response factor groups: a1...a11, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|-----|-----|-----------------------|--------|--------|
| | | | | | | ng/mg |
| Dibenzofuranes: | | | | | | |
| 51) | 20.76 | 168 | a5 | DBF | 8802 | 11 |
| 52) | 23.86 | 182 | a4 | MDBF-1 | 9102 | 16 |
| 53) | 24.22 | 182 | a4 | MDBF-2 | 7347 | 13 |
| 54) | 24.51 | 182 | a4 | MDBF-3 | 4726 | 9 |
| Fluorenes: | | | | | | |
| 55) | 22.71 | 166 | a6 | F | 18482 | 28 |
| 56) | 25.95 | 180 | a6 | C1-F-1 | 4465 | 7 |
| 57) | 26.18 | 180 | a6 | C1-F-2 | 16020 | 24 |
| 58) | 26.49 | 180 | a6 | 1-MF | 2495 | 4 |
| Dibenzothiophenes: | | | | | | |
| 60) | 27.42 | 184 | a7 | DBT | 3375 | 1 |
| 61) | 30.05 | 198 | a7 | 4-MDBT | 2514 | 1 |
| 62) | 30.58 | 198 | a7 | 3+2-MDBT | 627 | 0 |
| 63) | 31.15 | 198 | a7 | 1-MDBT | 555 | 0 |
| Phenanthrenes: | | | | | | |
| 64) | 28.14 | 178 | a8 | P | 76381 | 71 |
| 65) | 31.11 | 192 | a9 | 3-MP | 11661 | 13 |
| 66) | 31.24 | 192 | a9 | 2-MP | 13189 | 14 |
| 67) | 31.72 | 192 | a9 | 9-MP | 26936 | 30 |
| 68) | 31.85 | 192 | a9 | 1-MP | 14802 | 16 |
| 69) | 33.85 | 206 | a10 | 2EP+9EP+3.6-DMP | 2383 | 2 |
| 70) | 34.09 | 206 | a10 | 1EP | 1343 | 1 |
| 71) | 34.19 | 206 | a10 | 2.6+2.7+3.5-DMP | 766 | 1 |
| 72) | 34.52 | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 5728 | 6 |
| 73) | 34.66 | 206 | a10 | 1.6+2.5+2.9-DMP | 2822 | 3 |
| 74) | 34.80 | 206 | a10 | 1.7-DMP | 2441 | 3 |
| 75) | 34.96 | 206 | a10 | 2.3-DMP | 980 | 1 |
| 76) | 35.07 | 206 | a10 | 1.9+4.9+4.10-DMP | 2040 | 2 |
| 77) | 35.37 | 206 | a10 | 1.8-DMP | 981 | 1 |
| Retene: | | | | | | |
| 78) | 38.72 | 219 | a8 | Retene | 12111 | 11 |
| Triaromatic steroids: | | | | | | |
| 80) | 43.28 | 231 | a11 | 20TA | 32 | 0 |
| 81) | 45.15 | 231 | a11 | 21TA | 71 | 0 |
| 82) | 52.25 | 231 | a11 | S26TA | 34 | 0 |
| 83) | 53.47 | 231 | a11 | R26TA/S27TA | 57 | 0 |
| 84) | 54.48 | 231 | a11 | S28TA | 38 | 0 |
| 85) | 54.96 | 231 | a11 | R27TA | 29 | 0 |
| 86) | 56.23 | 231 | a11 | R28TA | 47 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|--------------------------------------|---------|-----|-----|-----------------|--------|--------|
| | | | | | | ng/mg |
| Internal standard (if added): | | | | | | |
| 14) | 10.38 | 136 | | d8N | 2026 | 48 |
| 16) | 19.64 | 164 | | d10BP | 20657 | 42 |
| 59) | 28.02 | 188 | | d10P | 40160 | 48 |
| 79) | 43.59 | 240 | | d12C | 13523 | 48 |
| Aryl isoprenoids: | | | | | | |
| 1) | 20.26 | 133 | 0 | C13AI | 21 | |
| 2) | 22.12 | 133 | 0 | C14AI | 57 | |
| 3) | 26.42 | 133 | 0 | C15AI | 10 | |
| 4) | 28.75 | 133 | 0 | C16AI | 22 | |
| 5) | 30.82 | 133 | 0 | C17AI | 72 | |
| 6) | 33.91 | 133 | 0 | C18AI | 51 | |
| 7) | 34.73 | 133 | 0 | C19AI | 107 | |
| 8) | 37.74 | 133 | 0 | C20AI | 52 | |
| 9) | 39.79 | 133 | 0 | C21AI | 72 | |
| 10) | 42.74 | 133 | 0 | C22AI | 188 | |
| 11) | 44.72 | 133 | 0 | C23AI | 56 | |
| 12) | 55.74 | 133 | 0 | C30AI | 26 | |
| 13) | 56.73 | 133 | 0 | C31AI | 14 | |
| Naphthalenes: | | | | | | |
| 15) | 10.47 | 128 | a1 | N | 432 | 9 |
| 17) | 13.94 | 142 | a2 | 2-MN | 4944 | 10 |
| 18) | 14.48 | 142 | a2 | 1-MN | 3324 | 6 |
| 19) | 17.08 | 156 | a3 | 2-EN | 752 | 1 |
| 20) | 17.19 | 156 | a3 | 1-EN | 421 | 1 |
| 21) | 17.40 | 156 | a3 | 2,6+2,7-DMN | 3067 | 6 |
| 22) | 17.86 | 156 | a3 | 1,3+1,7-DMN | 4954 | 9 |
| 23) | 17.95 | 156 | a3 | 1,6-DMN | 3717 | 7 |
| 24) | 18.46 | 156 | a3 | 2,3+1,4-DMN | 2441 | 4 |
| 25) | 18.55 | 156 | a3 | 1,5-DMN | 968 | 2 |
| 26) | 18.92 | 156 | a3 | 1,2-DMN | 790 | 1 |
| 27) | 20.61 | 170 | a4 | C3-N-1 | 193 | 0 |
| 28) | 20.98 | 170 | a4 | C3-N-2 | 315 | 1 |
| 29) | 21.10 | 170 | a4 | 1,3,7-TMN | 1107 | 2 |
| 30) | 21.24 | 170 | a4 | 1,3,6-TMN | 1767 | 3 |
| 31) | 21.71 | 170 | a4 | 1,3,5+1,4,6-TMN | 1502 | 3 |
| 32) | 21.79 | 170 | a4 | 2,3,6-TMN | 1113 | 2 |
| 33) | 22.21 | 170 | a4 | 1,6,7+1,2,7-TMN | 1148 | 2 |
| 34) | 22.24 | 170 | a4 | 1,2,6-TMN | 637 | 1 |
| 35) | 22.68 | 170 | a4 | 1,2,4-TMN | 202 | 0 |
| 36) | 22.90 | 170 | a4 | 1,2,5-TMN | 756 | 1 |
| Biphenyls: | | | | | | |
| 37) | 16.64 | 154 | a5 | BP | 2184 | 3 |
| 38) | 19.91 | 168 | a5 | 3-MBP | 2243 | 3 |
| 39) | 20.17 | 168 | a5 | 4-MBP | 694 | 1 |
| 40) | 20.23 | 182 | a4 | 2,3'-DMBP | 54 | 0 |
| 41) | 20.44 | 182 | a4 | 2,5-DMBP | 27 | 0 |
| 42) | 20.61 | 182 | a4 | 2,4+2,4'-DMBP | 49 | 0 |
| 43) | 21.24 | 182 | a4 | 2,3-DMBP | 116 | 0 |
| 44) | 22.61 | 182 | a4 | 3-EBP | 421 | 1 |
| 45) | 22.95 | 182 | a4 | 3,5-DMBP | 250 | 0 |
| 46) | 23.04 | 182 | a4 | 3,3'-DMBP | 625 | 1 |
| 47) | 23.14 | 182 | a4 | 4-EBP | 65 | 0 |
| 48) | 23.33 | 182 | a4 | 3,4'-DMBP | 392 | 1 |
| 49) | 23.55 | 182 | a4 | 4,4'-DMBP | 83 | 0 |
| 50) | 24.10 | 182 | a4 | 3,4-DMBP | 275 | 1 |

Aromatic hydrocarbons

GC/MS detection HP-6890/5973

Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1805A.D
Sample name: 31/5-6 swc, 1805a
Data File Path: C:\HPCHEM\1\DATA\31_5_6\
Misc. info.:

Vial no.: 16
Method: MSD_A_E2
Operator: Marian
Date: 8/20/2000 6:43

Response curve: y = ax+b
Response factor groups: a1...a11, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|-----|-----|-----------------------|--------|--------|
| | | | | | | ng/mg |
| Dibenzofuranes: | | | | | | |
| 51) | 20.76 | 168 | a5 | DBF | 787 | 1 |
| 52) | 23.85 | 182 | a4 | MDBF-1 | 842 | 2 |
| 53) | 24.22 | 182 | a4 | MDBF-2 | 676 | 1 |
| 54) | 24.51 | 182 | a4 | MDBF-3 | 425 | 1 |
| Fluorenes: | | | | | | |
| 55) | 22.71 | 166 | a6 | F | 1424 | 2 |
| 56) | 25.95 | 180 | a6 | C1-F-1 | 385 | 1 |
| 57) | 26.18 | 180 | a6 | C1-F-2 | 1390 | 2 |
| 58) | 26.48 | 180 | a6 | 1-MF | 243 | 0 |
| Dibenzothiophenes: | | | | | | |
| 60) | 27.42 | 184 | a7 | DBT | 167 | 0 |
| 61) | 30.05 | 198 | a7 | 4-MDBT | 209 | 0 |
| 62) | 30.59 | 198 | a7 | 3+2-MDBT | 37 | 0 |
| 63) | 31.15 | 198 | a7 | 1-MDBT | 32 | 0 |
| Phenanthrenes: | | | | | | |
| 64) | 28.12 | 178 | a8 | P | 7004 | 7 |
| 65) | 31.10 | 192 | a9 | 3-MP | 1293 | 2 |
| 66) | 31.24 | 192 | a9 | 2-MP | 1521 | 2 |
| 67) | 31.72 | 192 | a9 | 9-MP | 2395 | 3 |
| 68) | 31.84 | 192 | a9 | 1-MP | 1430 | 2 |
| 69) | 33.84 | 206 | a10 | 2EP+9EP+3,6-DMP | 248 | 0 |
| 70) | 34.08 | 206 | a10 | 1EP | 266 | 0 |
| 71) | 34.18 | 206 | a10 | 2,6+2,7+3,5-DMP | 137 | 0 |
| 72) | 34.51 | 206 | a10 | 1,3+2,10+3,9+3,10-DMI | 797 | 1 |
| 73) | 34.66 | 206 | a10 | 1,6+2,5+2,9-DMP | 448 | 1 |
| 74) | 34.80 | 206 | a10 | 1,7-DMP | 355 | 0 |
| 75) | 34.95 | 206 | a10 | 2,3-DMP | 148 | 0 |
| 76) | 35.06 | 206 | a10 | 1,9+4,9+4,10-DMP | 264 | 0 |
| 77) | 35.36 | 206 | a10 | 1,8-DMP | 109 | 0 |
| Retene: | | | | | | |
| 78) | 38.72 | 219 | a8 | Retene | 915 | 1 |
| Triaromatic steroids: | | | | | | |
| 80) | 43.22 | 231 | a11 | 20TA | 40 | 0 |
| 81) | 45.11 | 231 | a11 | 21TA | 54 | 0 |
| 82) | 52.23 | 231 | a11 | S26TA | 25 | 0 |
| 83) | 53.47 | 231 | a11 | R26TA/S27TA | 137 | 0 |
| 84) | 54.47 | 231 | a11 | S28TA | 67 | 0 |
| 85) | 54.98 | 231 | a11 | R27TA | 84 | 0 |
| 86) | 56.26 | 231 | a11 | R28TA | 65 | 0 |

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|--------------------------------------|---------|-----|-----|-----------------|--------|--------|
| | | | | | | ng/mg |
| Internal standard (if added): | | | | | | |
| 14) | 10.38 | 136 | | d8N | 37068 | 48 |
| 16) | 19.64 | 164 | | d10BP | 29225 | 42 |
| 59) | 28.01 | 188 | | d10P | 52820 | 48 |
| 79) | 43.59 | 240 | | d12C | 23331 | 48 |
| Aryl isoprenoids: | | | | | | |
| 1) | 20.26 | 133 | 0 | C13AI | | 8 |
| 2) | 22.14 | 133 | 0 | C14AI | | 14 |
| 3) | 26.36 | 133 | 0 | C15AI | | 4 |
| 4) | 28.83 | 133 | 0 | C16AI | | 17 |
| 5) | 30.82 | 133 | 0 | C17AI | | 39 |
| 6) | 33.71 | 133 | 0 | C18AI | | 31 |
| 7) | 34.73 | 133 | 0 | C19AI | | 56 |
| 8) | 37.83 | 133 | 0 | C20AI | | 37 |
| 9) | 39.75 | 133 | 0 | C21AI | | 37 |
| 10) | 42.75 | 133 | 0 | C22AI | | 70 |
| 11) | 44.66 | 133 | 0 | C23AI | | 18 |
| 12) | 55.78 | 133 | 0 | C30AI | | 13 |
| 13) | 56.76 | 133 | 0 | C31AI | | 11 |
| Naphthalenes: | | | | | | |
| 15) | 10.46 | 128 | a1 | N | 1450 | 2 |
| 17) | 13.94 | 142 | a2 | 2-MN | 1676 | 2 |
| 18) | 14.48 | 142 | a2 | 1-MN | 1068 | 1 |
| 19) | 17.08 | 156 | a3 | 2-EN | 172 | 0 |
| 20) | 17.18 | 156 | a3 | 1-EN | 81 | 0 |
| 21) | 17.41 | 156 | a3 | 2.6+2.7-DMN | 607 | 1 |
| 22) | 17.85 | 156 | a3 | 1.3+1.7-DMN | 969 | 1 |
| 23) | 17.96 | 156 | a3 | 1.6-DMN | 765 | 1 |
| 24) | 18.45 | 156 | a3 | 2.3+1.4-DMN | 462 | 1 |
| 25) | 18.56 | 156 | a3 | 1.5-DMN | 210 | 0 |
| 26) | 18.92 | 156 | a3 | 1.2-DMN | 153 | 0 |
| 27) | 20.61 | 170 | a4 | C3-N-1 | 50 | 0 |
| 28) | 20.99 | 170 | a4 | C3-N-2 | 78 | 0 |
| 29) | 21.10 | 170 | a4 | 1.3.7-TMN | 249 | 0 |
| 30) | 21.24 | 170 | a4 | 1.3.6-TMN | 384 | 1 |
| 31) | 21.71 | 170 | a4 | 1.3.5+1.4.6-TMN | 344 | 0 |
| 32) | 21.80 | 170 | a4 | 2.3.6-TMN | 239 | 0 |
| 33) | 22.20 | 170 | a4 | 1.6.7+1.2.7-TMN | 226 | 0 |
| 34) | 22.26 | 170 | a4 | 1.2.6-TMN | 136 | 0 |
| 35) | 22.69 | 170 | a4 | 1.2.4-TMN | 40 | 0 |
| 36) | 22.90 | 170 | a4 | 1.2.5-TMN | 164 | 0 |
| Biphenyls: | | | | | | |
| 37) | 16.63 | 154 | a5 | BP | 534 | 0 |
| 38) | 19.91 | 168 | a5 | 3-MBP | 447 | 0 |
| 39) | 20.17 | 168 | a5 | 4-MBP | 153 | 0 |
| 40) | 20.24 | 182 | a4 | 2.3'-DMBP | 13 | 0 |
| 41) | 20.43 | 182 | a4 | 2.5-DMBP | 6 | 0 |
| 42) | 20.61 | 182 | a4 | 2.4+2.4'-DMBP | 12 | 0 |
| 43) | 21.23 | 182 | a4 | 2.3-DMBP | 33 | 0 |
| 44) | 22.61 | 182 | a4 | 3-EBP | 71 | 0 |
| 45) | 22.95 | 182 | a4 | 3.5-DMBP | 55 | 0 |
| 46) | 23.05 | 182 | a4 | 3.3'-DMBP | 148 | 0 |
| 47) | 23.15 | 182 | a4 | 4-EBP | 17 | 0 |
| 48) | 23.33 | 182 | a4 | 3.4'-DMBP | 94 | 0 |
| 49) | 23.56 | 182 | a4 | 4.4'-DMBP | 25 | 0 |
| 50) | 24.09 | 182 | a4 | 3.4-DMBP | 62 | 0 |

Aromatic hydrocarbons

GC/MS detection HP-6890/5973

Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway
Petroleum Geochemistry Laboratories

Data file name: 1814A.D
Sample name: 31/5-6 swc, 1814a
Data File Path: C:\HPCHEM\1\DATA\31_5_6\
Misc. info.:
Vial no.: 17
Method: MSD_A_E2
Operator: Marian
Date: 8/20/2000 8:11

Response curve: y = ax+b
Response factor groups: a1...a11, responses as defined in method

| # | Rt.min. | m/z | Rf. | Name | Height | Amount |
|------------------------------|---------|-----|-----|-----------------------|--------|--------|
| | | | | | | ng/mg |
| Dibenzofuranes: | | | | | | |
| 51) | 20.75 | 168 | a5 | DBF | 177 | 0 |
| 52) | 23.86 | 182 | a4 | MDBF-1 | 138 | 0 |
| 53) | 24.21 | 182 | a4 | MDBF-2 | 124 | 0 |
| 54) | 24.50 | 182 | a4 | MDBF-3 | 80 | 0 |
| Fluorenes: | | | | | | |
| 55) | 22.72 | 166 | a6 | F | 296 | 0 |
| 56) | 25.95 | 180 | a6 | C1-F-1 | 71 | 0 |
| 57) | 26.18 | 180 | a6 | C1-F-2 | 237 | 0 |
| 58) | 26.48 | 180 | a6 | 1-MF | 54 | 0 |
| Dibenzothiophenes: | | | | | | |
| 60) | 27.43 | 184 | a7 | DBT | 25 | 0 |
| 61) | 30.05 | 198 | a7 | 4-MDBT | 65 | 0 |
| 62) | 30.58 | 198 | a7 | 3+2-MDBT | 8 | 0 |
| 63) | 31.14 | 198 | a7 | 1-MDBT | 9 | 0 |
| Phenanthrenes: | | | | | | |
| 64) | 28.13 | 178 | a8 | P | 1428 | 1 |
| 65) | 31.10 | 192 | a9 | 3-MP | 356 | 0 |
| 66) | 31.24 | 192 | a9 | 2-MP | 406 | 0 |
| 67) | 31.71 | 192 | a9 | 9-MP | 523 | 0 |
| 68) | 31.84 | 192 | a9 | 1-MP | 342 | 0 |
| 69) | 33.87 | 206 | a10 | 2EP+9EP+3.6-DMP | 72 | 0 |
| 70) | 34.08 | 206 | a10 | 1EP | 115 | 0 |
| 71) | 34.17 | 206 | a10 | 2.6+2.7+3.5-DMP | 68 | 0 |
| 72) | 34.51 | 206 | a10 | 1.3+2.10+3.9+3.10-DMI | 288 | 0 |
| 73) | 34.66 | 206 | a10 | 1.6+2.5+2.9-DMP | 161 | 0 |
| 74) | 34.80 | 206 | a10 | 1.7-DMP | 132 | 0 |
| 75) | 34.95 | 206 | a10 | 2.3-DMP | 63 | 0 |
| 76) | 35.06 | 206 | a10 | 1.9+4.9+4.10-DMP | 75 | 0 |
| 77) | 35.36 | 206 | a10 | 1.8-DMP | 39 | 0 |
| Retene: | | | | | | |
| 78) | 38.72 | 219 | a8 | Retene | 186 | 0 |
| Triaromatic steroids: | | | | | | |
| 80) | 43.21 | 231 | a11 | 20TA | 11 | 0 |
| 81) | 45.11 | 231 | a11 | 21TA | 10 | 0 |
| 82) | 52.27 | 231 | a11 | S26TA | 7 | 0 |
| 83) | 53.45 | 231 | a11 | R26TA/S27TA | 18 | 0 |
| 84) | 54.49 | 231 | a11 | S28TA | 12 | 0 |
| 85) | 54.96 | 231 | a11 | R27TA | 8 | 0 |
| 86) | 56.20 | 231 | a11 | R28TA | 10 | 0 |