

Lithology Descriptions (Table 6)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology Descriptions
6508/1-1A	99028- 98	2280.0	2280.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 99	2290.0	2290.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 100	2300.0	2300.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 101	2310.0	2310.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 102	2320.0	2320.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 103	2330.0	2330.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 104	2340.0	2340.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 105	2350.0	2350.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, brn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 106	2360.0	2360.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Clyst, grn gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 107	2370.0	2370.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 108	2380.0	2380.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 109	2390.0	2390.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 110	2400.0	2400.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy + tr Sh, blk
6508/1-1A	99028- 111	2410.0	2410.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy + tr Sh, blk
6508/1-1A	99028- 112	2420.0	2420.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr LCM (nut plug) + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 113	2430.0	2430.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 114	2440.0	2440.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 115	2450.0	2450.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 116	2460.0	2460.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 117	2470.0	2470.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 10 % Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 118	2480.0	2480.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 119	2490.0	2490.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Sh, dk gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 120	2500.0	2500.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 121	2510.0	2510.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 122	2520.0	2520.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Lst, v lt gy
6508/1-1A	99028- 123	2530.0	2530.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Lst, v lt gy
6508/1-1A	99028- 124	2540.0	2540.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + tr Lst, v lt gy
6508/1-1A	99028- 125	2550.0	2550.0	Cuttings	Sh, med dk gy + tr Clyst, lt gy
6508/1-1A	99028- 126	2560.0	2560.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % Sh, v dsky rd + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 127	2570.0	2570.0	Cuttings	Sh, med dk gy + 20 % Clyst, lt gy + 20 % Sh, v dsky rd + tr Lst, v lt gy + tr Clyst, yel gy
6508/1-1A	99028- 128	2580.0	2580.0	Cuttings	Sh, olv blk + tr Clyst, lt gy + tr Lst, v lt gy
6508/1-1A	99028- 129	2589.0	2589.0	Cuttings	Lst, v lt gy + tr Sh, olv blk + tr Clyst, med dk gy

Lithology Descriptions (Table 6)

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology Descriptions
6508/1-1A	99028-130	2598.0	2598.0	Cuttings	Sh, med dk gy + 20 % Lst, v lt gy + 10 % Clyst, lt gy + tr Sh, olv blk
6508/1-1A	99028-131	2607.0	2607.0	Cuttings	Sh, olv blk + 10 % Lst, v lt gy + tr Sh, med dk gy
6508/1-1A	99028-132	2616.0	2616.0	Cuttings	Sh, olv blk + tr Lst, v lt gy + tr Sh, med dk gy
6508/1-1A	99028-133	2625.0	2625.0	Cuttings	Sh, olv blk + tr Lst, v lt gy
6508/1-1A	99028-134	2634.0	2634.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-135	2643.0	2643.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-136	2652.0	2652.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-137	2661.0	2661.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-138	2670.0	2670.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-139	2679.0	2679.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-140	2688.0	2688.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy
6508/1-1A	99028-141	2697.0	2697.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + 20 % Lst, v lt gy
6508/1-1A	99028-142	2706.0	2706.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-143	2715.0	2715.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-144	2724.0	2724.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr
6508/1-1A	99028-145	2733.0	2733.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-146	2742.0	2742.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy + tr Paint
6508/1-1A	99028-147	2751.0	2751.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy
6508/1-1A	99028-148	2760.0	2760.0	Cuttings	Sh, olv blk + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, med dk gy
6508/1-1A	99028-149	2769.0	2769.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk
6508/1-1A	99028-150	2778.0	2778.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk
6508/1-1A	99028-151	2787.0	2787.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk
6508/1-1A	99028-152	2796.0	2796.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, lt gy
6508/1-1A	99028-153	2805.0	2805.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, lt gy
6508/1-1A	99028-154	2814.0	2814.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, lt gy
6508/1-1A	99028-155	2823.0	2823.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, pa yel brn
6508/1-1A	99028-156	2832.0	2832.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, pa yel brn + tr Lst, wht
6508/1-1A	99028-157	2841.0	2841.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, pa yel brn
6508/1-1A	99028-158	2850.0	2850.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, pa yel brn
6508/1-1A	99028-159	2859.0	2859.0	Cuttings	Sh, med dk gy + 20 % Sh, dk gy + tr Lst, v lt gy + tr Sh, olv blk + tr Clyst, pa yel brn + tr Lst, wht

ROCK EVAL PYROLYSIS AND TOC DATA (Table 7)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	S1 mg/g	S2 mg/g	S3 mg/g	Tmax deg C	TOC % wt
6508/1-1A	NOR	99028-1X	1230.0	1230.0	SE Cuttings	0.34	1.04	1.89	439	0.52
6508/1-1A	NOR	99028-2X	1240.0	1240.0	SE Cuttings					0.43
6508/1-1A	NOR	99028-3X	1250.0	1250.0	SE Cuttings					0.43
6508/1-1A	NOR	99028-4X	1260.0	1260.0	SE Cuttings	0.37	0.40	0.78	406	0.42
6508/1-1A	NOR	99028-5X	1270.0	1270.0	SE Cuttings					0.38
6508/1-1A	NOR	99028-6X	1280.0	1280.0	SE Cuttings					0.41
6508/1-1A	NOR	99028-7X	1290.0	1290.0	SE Cuttings	0.31	0.21	0.62	392	0.38
6508/1-1A	NOR	99028-8X	1300.0	1300.0	SE Cuttings					0.47
6508/1-1A	NOR	99028-9X	1310.0	1310.0	SE Cuttings					0.45
6508/1-1A	NOR	99028-10X	1330.0	1330.0	SE Cuttings	0.19	0.21	0.61	398	0.38
6508/1-1A	NOR	99028-11X	1350.0	1350.0	SE Cuttings					0.58
6508/1-1A	NOR	99028-12X	1360.0	1360.0	SE Cuttings					0.66
6508/1-1A	NOR	99028-13X	1370.0	1370.0	SE Cuttings	0.36	0.76	0.88	417	0.83
6508/1-1A	NOR	99028-14X	1380.0	1380.0	SE Cuttings					0.93
6508/1-1A	NOR	99028-15X	1390.0	1390.0	SE Cuttings					0.86
6508/1-1A	NOR	99028-16X	1400.0	1400.0	SE Cuttings	0.89	1.17	1.12	416	0.95
6508/1-1A	NOR	99028-17X	1410.0	1410.0	SE Cuttings					0.92
6508/1-1A	NOR	99028-18X	1420.0	1420.0	SE Cuttings					0.93
6508/1-1A	NOR	99028-19X	1430.0	1430.0	SE Cuttings	0.33	0.90	1.18	410	0.98
6508/1-1A	NOR	99028-20X	1440.0	1440.0	SE Cuttings					1.24
6508/1-1A	NOR	99028-21X	1450.0	1450.0	SE Cuttings					1.37
6508/1-1A	NOR	99028-22X	1460.0	1460.0	SE Cuttings	0.44	1.35	1.16	418	1.43
6508/1-1A	NOR	99028-23X	1470.0	1470.0	SE Cuttings					1.43
6508/1-1A	NOR	99028-24X	1480.0	1480.0	SE Cuttings					1.61
6508/1-1A	NOR	99028-25X	1490.0	1490.0	SE Cuttings	0.63	1.76	1.35	419	1.45
6508/1-1A	NOR	99028-26X	1500.0	1500.0	SE Cuttings					1.56
6508/1-1A	NOR	99028-27X	1510.0	1510.0	SE Cuttings					1.72
6508/1-1A	NOR	99028-28X	1520.0	1520.0	SE Cuttings	0.52	2.03	1.31	420	1.60
6508/1-1A	NOR	99028-29X	1530.0	1530.0	SE Cuttings					1.70
6508/1-1A	NOR	99028-30X	1550.0	1550.0	SE Cuttings	0.43	2.10	1.53	421	1.79
6508/1-1A	NOR	99028-31X	1560.0	1560.0	SE Cuttings					1.61
6508/1-1A	NOR	99028-32X	1570.0	1570.0	SE Cuttings					1.65
6508/1-1A	NOR	99028-33X	1580.0	1580.0	SE Cuttings	0.49	1.89	1.51	423	1.75
6508/1-1A	NOR	99028-34X	1590.0	1590.0	SE Cuttings					1.86
6508/1-1A	NOR	99028-35X	1600.0	1600.0	SE Cuttings					2.51
6508/1-1A	NOR	99028-36X	1610.0	1610.0	SE Cuttings	0.50	2.48	1.97	423	2.61
6508/1-1A	NOR	99028-37X	1620.0	1620.0	SE Cuttings	0.59	4.17	3.09	420	3.68
6508/1-1A	NOR	99028-38X	1630.0	1630.0	SE Cuttings	1.28	7.43	3.07	421	5.36
6508/1-1A	NOR	99028-39X	1640.0	1640.0	SE Cuttings	0.91	5.77	2.81	421	4.13
6508/1-1A	NOR	99028-40X	1650.0	1650.0	SE Cuttings	0.49	3.71	2.00	420	3.10
6508/1-1A	NOR	99028-41X	1660.0	1660.0	SE Cuttings	0.64	2.51	2.02	415	2.24
6508/1-1A	NOR	99028-42X	1680.0	1680.0	SE Cuttings	0.63	2.00	1.64	417	1.71
6508/1-1A	NOR	99028-43X	1690.0	1690.0	SE Cuttings	0.47	1.97	1.78	420	1.98
6508/1-1A	NOR	99028-44X	1700.0	1700.0	SE Cuttings	0.61	1.40	1.55	420	1.55
6508/1-1A	NOR	99028-45X	1710.0	1710.0	SE Cuttings	0.35	0.54	1.36	372	0.72
6508/1-1A	NOR	99028-46X	1720.0	1720.0	SE Cuttings					0.47
6508/1-1A	NOR	99028-47X	1730.0	1730.0	SE Cuttings					0.53
6508/1-1A	NOR	99028-48X	1740.0	1740.0	SE Cuttings					0.37
6508/1-1A	NOR	99028-49X	1750.0	1750.0	SE Cuttings					0.51

ROCK EVAL PYROLYSIS AND TOC DATA (Table 7)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	S1 mg/g	S2 mg/g	S3 mg/g	Tmax deg C	TOC % wt
6508/1-1A	NOR	99028-50X	1770.0	1770.0	SE Cuttings					0.41
6508/1-1A	NOR	99028-51X	1780.0	1780.0	SE Cuttings	0.64	0.76	1.52	377	0.50
6508/1-1A	NOR	99028-52X	1800.0	1800.0	SE Cuttings					0.61
6508/1-1A	NOR	99028-53X	1810.0	1810.0	SE Cuttings					0.60
6508/1-1A	NOR	99028-54X	1820.0	1820.0	SE Cuttings					0.96
6508/1-1A	NOR	99028-55X	1830.0	1830.0	SE Cuttings					0.48
6508/1-1A	NOR	99028-56X	1840.0	1840.0	SE Cuttings					0.74
6508/1-1A	NOR	99028-57X	1850.0	1850.0	SE Cuttings	0.54	1.46	1.78	425	1.72
6508/1-1A	NOR	99028-58X	1860.0	1860.0	SE Cuttings					1.20
6508/1-1A	NOR	99028-59X	1870.0	1870.0	SE Cuttings					1.14
6508/1-1A	NOR	99028-60X	1880.0	1880.0	SE Cuttings	0.61	0.82	1.32	423	1.26
6508/1-1A	NOR	99028-61X	1890.0	1890.0	SE Cuttings					0.92
6508/1-1A	NOR	99028-62X	1900.0	1900.0	SE Cuttings					0.93
6508/1-1A	NOR	99028-63X	1910.0	1910.0	SE Cuttings					0.79
6508/1-1A	NOR	99028-64X	1920.0	1920.0	SE Cuttings	0.49	0.32	1.15	384	0.53
6508/1-1A	NOR	99028-65X	1930.0	1930.0	SE Cuttings					0.71
6508/1-1A	NOR	99028-66X	1940.0	1940.0	SE Cuttings					1.10
6508/1-1A	NOR	99028-67X	1950.0	1950.0	SE Cuttings	0.49	0.53	1.02	409	0.58
6508/1-1A	NOR	99028-68X	1960.0	1960.0	SE Cuttings	0.60	0.45	1.08	377	0.51
6508/1-1A	NOR	99028-69X	1970.0	1970.0	SE Cuttings					0.43
6508/1-1A	NOR	99028-70X	1980.0	1980.0	SE Cuttings					0.57
6508/1-1A	NOR	99028-71X	1990.0	1990.0	SE Cuttings	0.37	0.40	1.64	353	0.42
6508/1-1A	NOR	99028-72X	2000.0	2000.0	SE Cuttings	0.45	0.46	1.74	359	1.06
6508/1-1A	NOR	99028-73X	2010.0	2010.0	SE Cuttings					0.77
6508/1-1A	NOR	99028-74X	2020.0	2020.0	SE Cuttings					0.79
6508/1-1A	NOR	99028-75X	2030.0	2030.0	SE Cuttings	0.31	0.50	1.33	377	0.83
6508/1-1A	NOR	99028-76X	2040.0	2040.0	SE Cuttings					0.79
6508/1-1A	NOR	99028-77X	2050.0	2050.0	SE Cuttings					0.99
6508/1-1A	NOR	99028-78X	2060.0	2060.0	SE Cuttings	0.25	0.48	1.22	403	0.96
6508/1-1A	NOR	99028-79X	2070.0	2070.0	SE Cuttings	0.22	0.45	1.17	397	0.80
6508/1-1A	NOR	99028-80X	2080.0	2080.0	SE Cuttings					0.83
6508/1-1A	NOR	99028-81X	2090.0	2090.0	SE Cuttings					0.86
6508/1-1A	NOR	99028-82X	2100.0	2100.0	SE Cuttings	0.46	0.66	1.15	408	1.03
6508/1-1A	NOR	99028-83X	2110.0	2110.0	SE Cuttings					1.11
6508/1-1A	NOR	99028-84X	2120.0	2120.0	SE Cuttings					1.01
6508/1-1A	NOR	99028-85X	2130.0	2130.0	SE Cuttings	0.28	0.78	1.33	416	1.01
6508/1-1A	NOR	99028-86X	2140.0	2140.0	SE Cuttings					1.08
6508/1-1A	NOR	99028-87X	2150.0	2150.0	SE Cuttings					1.09
6508/1-1A	NOR	99028-88X	2160.0	2160.0	SE Cuttings	0.39	0.88	1.27	419	1.03
6508/1-1A	NOR	99028-89X	2170.0	2170.0	SE Cuttings					0.97
6508/1-1A	NOR	99028-90X	2180.0	2180.0	SE Cuttings					0.95
6508/1-1A	NOR	99028-91X	2200.0	2200.0	SE Cuttings	0.25	0.70	1.25	416	1.07
6508/1-1A	NOR	99028-92X	2210.0	2210.0	SE Cuttings	0.17	0.70	1.23	419	1.09
6508/1-1A	NOR	99028-93X	2220.0	2220.0	SE Cuttings	0.17	0.62	1.00	420	1.06
6508/1-1A	NOR	99028-94X	2230.0	2230.0	SE Cuttings	0.20	0.62	0.79	421	1.05
6508/1-1A	NOR	99028-95X	2240.0	2240.0	SE Cuttings	0.22	0.63	1.15	424	1.03
6508/1-1A	NOR	99028-96X	2260.0	2260.0	SE Cuttings	0.17	0.69	0.98	422	0.96
6508/1-1A	NOR	99028-97X	2270.0	2270.0	SE Cuttings	0.38	0.81	1.23	419	0.99
6508/1-1A	NOR	99028-98X	2280.0	2280.0	SE Cuttings	0.30	0.80	1.34	420	0.99

ROCK EVAL PYROLYSIS AND TOC DATA (Table 7)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	S1 mg/g	S2 mg/g	S3 mg/g	Tmax deg C	TOC % wt
6508/1-1A	NOR	99028-99X	2290.0	2290.0	SE Cuttings	0.26	0.78	1.27	419	0.93
6508/1-1A	NOR	99028-100X	2300.0	2300.0	SE Cuttings	0.43	0.96	1.26	422	0.96
6508/1-1A	NOR	99028-101X	2310.0	2310.0	SE Cuttings	0.24	0.70	1.13	419	1.02
6508/1-1A	NOR	99028-102X	2320.0	2320.0	SE Cuttings	0.28	0.79	1.34	426	0.94
6508/1-1A	NOR	99028-103X	2330.0	2330.0	SE Cuttings	0.16	0.58	1.21	426	1.00
6508/1-1A	NOR	99028-104X	2340.0	2340.0	SE Cuttings	0.23	0.77	1.03	426	1.02
6508/1-1A	NOR	99028-105X	2350.0	2350.0	SE Cuttings	0.17	0.60	1.08	425	0.91
6508/1-1A	NOR	99028-106X	2360.0	2360.0	SE Cuttings	0.25	0.49	1.02	423	0.98
6508/1-1A	NOR	99028-107X	2370.0	2370.0	SE Cuttings	0.25	0.82	1.37	427	1.15
6508/1-1A	NOR	99028-108X	2380.0	2380.0	SE Cuttings	0.23	0.74	1.46	426	1.09
6508/1-1A	NOR	99028-109X	2390.0	2390.0	SE Cuttings	0.25	0.97	1.39	425	1.21
6508/1-1A	NOR	99028-110X	2400.0	2400.0	SE Cuttings	0.20	0.83	1.98	426	1.23
6508/1-1A	NOR	99028-111X	2410.0	2410.0	SE Cuttings	0.19	0.75	1.39	429	1.13
6508/1-1A	NOR	99028-112X	2420.0	2420.0	SE Cuttings					1.20
6508/1-1A	NOR	99028-113X	2430.0	2430.0	SE Cuttings					1.06
6508/1-1A	NOR	99028-114X	2440.0	2440.0	SE Cuttings	0.26	1.11	1.38	430	1.05
6508/1-1A	NOR	99028-115X	2450.0	2450.0	SE Cuttings					1.12
6508/1-1A	NOR	99028-116X	2460.0	2460.0	SE Cuttings					1.28
6508/1-1A	NOR	99028-117X	2470.0	2470.0	SE Cuttings	0.34	0.92	2.93	423	1.25
6508/1-1A	NOR	99028-118X	2480.0	2480.0	SE Cuttings					1.22
6508/1-1A	NOR	99028-119X	2490.0	2490.0	SE Cuttings					1.26
6508/1-1A	NOR	99028-120X	2500.0	2500.0	SE Cuttings	0.34	0.83	1.60	425	1.42
6508/1-1A	NOR	99028-121X	2510.0	2510.0	SE Cuttings					1.10
6508/1-1A	NOR	99028-122X	2520.0	2520.0	SE Cuttings					1.04
6508/1-1A	NOR	99028-123X	2530.0	2530.0	SE Cuttings	0.18	0.90	2.88	422	1.18
6508/1-1A	NOR	99028-124X	2540.0	2540.0	SE Cuttings					1.09
6508/1-1A	NOR	99028-125X	2550.0	2550.0	SE Cuttings					1.33
6508/1-1A	NOR	99028-126X	2560.0	2560.0	SE Cuttings	0.21	0.93	2.64	427	1.06
6508/1-1A	NOR	99028-127X	2570.0	2570.0	SE Cuttings					1.08
6508/1-1A	NOR	99028-128X	2580.0	2580.0	SE Cuttings	0.39	42.74	1.30	417	9.17
6508/1-1A	NOR	99028-129X	2589.0	2589.0	SE Cuttings	0.45	2.71	2.60	435	1.26
6508/1-1A	NOR	99028-130X	2598.0	2598.0	SE Cuttings	0.46	18.41	3.03	423	5.10
6508/1-1A	NOR	99028-131X	2607.0	2607.0	SE Cuttings	0.49	32.29	1.49	417	7.79
6508/1-1A	NOR	99028-132X	2616.0	2616.0	SE Cuttings	0.57	36.23	1.11	415	7.71
6508/1-1A	NOR	99028-133X	2625.0	2625.0	SE Cuttings	0.54	44.16	1.34	415	8.80
6508/1-1A	NOR	99028-134X	2634.0	2634.0	SE Cuttings	0.43	43.10	1.42	417	8.52
6508/1-1A	NOR	99028-135X	2643.0	2643.0	SE Cuttings	0.38	43.47	1.52	416	9.12
6508/1-1A	NOR	99028-136X	2652.0	2652.0	SE Cuttings	0.42	40.38	1.69	413	8.73
6508/1-1A	NOR	99028-137X	2661.0	2661.0	SE Cuttings	0.39	40.39	1.58	413	8.49
6508/1-1A	NOR	99028-138X	2670.0	2670.0	SE Cuttings	0.61	39.63	1.67	413	8.88
6508/1-1A	NOR	99028-139X	2679.0	2679.0	SE Cuttings	0.45	38.73	1.90	414	8.87
6508/1-1A	NOR	99028-140X	2688.0	2688.0	SE Cuttings	0.33	35.70	1.66	418	9.11
6508/1-1A	NOR	99028-141X	2697.0	2697.0	SE Cuttings	0.29	24.96	2.38	421	7.56
6508/1-1A	NOR	99028-142X	2706.0	2706.0	SE Cuttings	0.45	32.56	1.10	418	9.14
6508/1-1A	NOR	99028-143X	2715.0	2715.0	SE Cuttings	0.45	32.07	1.12	419	9.13
6508/1-1A	NOR	99028-144X	2724.0	2724.0	SE Cuttings	0.49	27.71	1.29	418	8.80
6508/1-1A	NOR	99028-145X	2733.0	2733.0	SE Cuttings	0.69	24.01	1.53	414	8.26
6508/1-1A	NOR	99028-146X	2742.0	2742.0	SE Cuttings	0.43	24.56	1.35	416	7.94
6508/1-1A	NOR	99028-147X	2751.0	2751.0	SE Cuttings	0.40	14.35	1.37	418	6.03
6508/1-1A	NOR	99028-148X	2760.0	2760.0	SE Cuttings	0.50	14.05	1.34	419	5.53
6508/1-1A	NOR	99028-149X	2769.0	2769.0	SE Cuttings	0.41	8.84	1.25	423	3.95
6508/1-1A	NOR	99028-150X	2778.0	2778.0	SE Cuttings	0.49	8.00	1.27	423	3.67

ROCK EVAL PYROLYSIS AND TOC DATA (Table 7)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	S1 mg/g	S2 mg/g	S3 mg/g	Tmax deg.C	TOC % wt
6508/1-1A	NOR	99028-151X	2787.0	2787.0	SE Cuttings	0.36	7.16	1.15	423	3.06
6508/1-1A	NOR	99028-152X	2796.0	2796.0	SE Cuttings	0.41	6.17	1.45	427	3.27
6508/1-1A	NOR	99028-153X	2805.0	2805.0	SE Cuttings	0.33	4.53	1.43	427	2.55
6508/1-1A	NOR	99028-154X	2814.0	2814.0	SE Cuttings	0.38	5.67	1.75	423	2.86
6508/1-1A	NOR	99028-155X	2823.0	2823.0	SE Cuttings	0.18	3.05	1.65	425	1.97
6508/1-1A	NOR	99028-156X	2832.0	2832.0	SE Cuttings	0.56	2.97	1.90	424	1.94
6508/1-1A	NOR	99028-157X	2841.0	2841.0	SE Cuttings	0.29	2.72	1.95	424	1.76
6508/1-1A	NOR	99028-158X	2850.0	2850.0	SE Cuttings	0.34	2.31	1.97	427	1.49
6508/1-1A	NOR	99028-159X	2859.0	2859.0	SE Cuttings	0.35	1.91	1.77	427	1.41

Extraction and Iatroscan Fractionation Data (Table 8)

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Rock Wt (Gm)	Extract Yield (mg/g)	Sats (mg/g)	Aroms (mg/g)	Polar (mg/g)
6508/1-1A	NOR	99028- 1	1230.0	1230.0	Cuttings	2.0	0.85	0.08	0.05	0.72
6508/1-1A	NOR	99028- 4	1260.0	1260.0	Cuttings	2.0	0.20	0.02	0.01	0.17
6508/1-1A	NOR	99028- 7	1290.0	1290.0	Cuttings	2.0	0.60	0.04	0.02	0.54
6508/1-1A	NOR	99028- 10	1330.0	1330.0	Cuttings	2.0	0.45	0.03	0.02	0.40
6508/1-1A	NOR	99028- 13	1370.0	1370.0	Cuttings	2.0	0.50	0.04	0.02	0.44
6508/1-1A	NOR	99028- 16	1400.0	1400.0	Cuttings	2.0	1.60	0.03	0.02	1.54
6508/1-1A	NOR	99028- 19	1430.0	1430.0	Cuttings	2.0	3.55	0.05	0.05	3.44
6508/1-1A	NOR	99028- 22	1460.0	1460.0	Cuttings	2.0	1.45	0.03	0.02	1.40
6508/1-1A	NOR	99028- 45	1710.0	1710.0	Cuttings	2.0	4.25	0.11	0.08	4.06
6508/1-1A	NOR	99028- 51	1780.0	1780.0	Cuttings	2.0	5.80	0.16	0.16	5.49
6508/1-1A	NOR	99028- 57	1850.0	1850.0	Cuttings	2.0	5.25	0.13	0.13	5.00
6508/1-1A	NOR	99028- 60	1880.0	1880.0	Cuttings	2.0	3.40	0.11	0.07	3.23
6508/1-1A	NOR	99028- 64	1920.0	1920.0	Cuttings	2.0	4.10	0.09	0.09	3.91
6508/1-1A	NOR	99028- 67	1950.0	1950.0	Cuttings	2.0	1.70	0.04	0.04	1.62
6508/1-1A	NOR	99028- 68	1960.0	1960.0	Cuttings	2.0	2.20	0.07	0.07	2.07
6508/1-1A	NOR	99028- 71	1990.0	1990.0	Cuttings	2.0	2.55	0.06	0.04	2.45
6508/1-1A	NOR	99028- 72	2000.0	2000.0	Cuttings	2.0	1.20	0.06	0.03	1.11
6508/1-1A	NOR	99028- 130	2598.0	2598.0	Cuttings	2.0	10.55	0.55	0.73	9.27
6508/1-1A	NOR	99028- 131	2607.0	2607.0	Cuttings	2.0	14.50	0.75	1.02	12.73
6508/1-1A	NOR	99028- 132	2616.0	2616.0	Cuttings	2.0	13.50	0.58	1.17	11.75
6508/1-1A	NOR	99028- 133	2625.0	2625.0	Cuttings	2.0	12.90	0.97	1.16	10.77
6508/1-1A	NOR	99028- 134	2634.0	2634.0	Cuttings	2.0	13.10	0.54	1.07	11.49
6508/1-1A	NOR	99028- 135	2643.0	2643.0	Cuttings	2.0	13.15	0.46	1.03	11.66
6508/1-1A	NOR	99028- 136	2652.0	2652.0	Cuttings	2.0	14.30	0.63	1.12	12.56
6508/1-1A	NOR	99028- 137	2661.0	2661.0	Cuttings	2.0	13.60	0.80	1.39	11.41
6508/1-1A	NOR	99028- 138	2670.0	2670.0	Cuttings	2.0	13.90	0.56	1.21	12.13
6508/1-1A	NOR	99028- 139	2679.0	2679.0	Cuttings	2.0	13.85	0.76	1.18	11.91
6508/1-1A	NOR	99028- 140	2688.0	2688.0	Cuttings	2.0	13.15	0.66	0.87	11.62
6508/1-1A	NOR	99028- 141	2697.0	2697.0	Cuttings	2.0	11.40	0.65	1.01	9.74
6508/1-1A	NOR	99028- 142	2706.0	2706.0	Cuttings	2.0	13.85	0.75	0.90	12.20
6508/1-1A	NOR	99028- 143	2715.0	2715.0	Cuttings	2.0	13.00	0.78	0.78	11.44
6508/1-1A	NOR	99028- 144	2724.0	2724.0	Cuttings	2.0	15.70	0.77	1.02	13.91
6508/1-1A	NOR	99028- 145	2733.0	2733.0	Cuttings	2.0	14.90	0.83	1.06	13.01
6508/1-1A	NOR	99028- 146	2742.0	2742.0	Cuttings	2.0	13.10	0.55	1.10	11.45
6508/1-1A	NOR	99028- 147	2751.0	2751.0	Cuttings	2.0	11.25	0.74	1.02	9.48
6508/1-1A	NOR	99028- 148	2760.0	2760.0	Cuttings	2.0	10.00	0.63	0.73	8.64
6508/1-1A	NOR	99028- 149	2769.0	2769.0	Cuttings	2.0	8.10	0.92	0.84	6.34
6508/1-1A	NOR	99028- 150	2778.0	2778.0	Cuttings	2.0	6.80	0.65	0.54	5.61
6508/1-1A	NOR	99028- 151	2787.0	2787.0	Cuttings	2.0	5.50	0.63	0.61	4.26
6508/1-1A	NOR	99028- 152	2796.0	2796.0	Cuttings	2.0	6.70	0.72	0.57	5.41
6508/1-1A	NOR	99028- 153	2805.0	2805.0	Cuttings	2.0	3.70	0.32	0.32	3.06
6508/1-1A	NOR	99028- 154	2814.0	2814.0	Cuttings	2.0	4.75	0.43	0.38	3.94
6508/1-1A	NOR	99028- 155	2823.0	2823.0	Cuttings	2.0	3.35	0.30	0.27	2.77
6508/1-1A	NOR	99028- 156	2832.0	2832.0	Cuttings	2.0	3.90	0.27	0.33	3.30
6508/1-1A	NOR	99028- 157	2841.0	2841.0	Cuttings	2.0	3.55	0.19	0.24	3.12
6508/1-1A	NOR	99028- 158	2850.0	2850.0	Cuttings	2.0	3.35	0.19	0.19	2.96
6508/1-1A	NOR	99028- 159	2859.0	2859.0	Cuttings	2.0	3.90	0.23	0.23	3.43

L-964

.3

IFE/KR/F-99/160

**DATAREPORT ON STABLE ISOTOPES, GAS
SAMPLES (CUTTINGS) FROM WELL 6508/1-1A**

REGISTRERT
OLJEDIREKTORATET

10 DES. 1999

BA 99-1901-1



Institutt for energiteknikk
Institute for Energy Technology

1 Introduction

Eight gas samples (cuttings) from Saga Petroleum well 6508/1-1A, ranging in depth from 1400m to 2805m, are analysed for isotopic composition. The gas composition is given by Robertson Laboratories.

A complete analysis of all components has not been possible due to low hydrocarbon concentration in some of the samples. The hydrogen isotope composition of methane and oxygen isotope composition of CO₂ is not determined due to low gas concentration.

2 Analytical procedures

Aliquots are sampled with a syringe and analysed on a VG Isochrom connected on line to a VG Optima Mass spectrometer. A HP 5890 II with a Poraplot Q column is used for the separation and helium is used as a carrier gas. The injections are performed in splitless mode. No hydrogen or oxygen isotopic composition is included in the analytical procedure.

Based on repeated analysis of a laboratory standard gas mixture, the reproducibility in the $\delta^{13}\text{C}$ value is better than 1.0 ‰ for methane and 0.5‰ for the higher hydrocarbons.

3 Results

The gas composition of the headspace gas is shown in Table 1 (determined by Robertson Laboratories), and the stable isotope composition is shown in Table 2.

Table 1 Gas composition of samples from well 6508/1-1A

Sample	Depth (m)	IFE no GEO	C ₁ ppm	C ₂ ppm	C ₃ ppm	iC ₄ ppm	nC ₄ ppm	iC ₅ ppm	nC ₅ ppm	C ₅₊ ppm
99028-16	1400	992244	3779.0	19.1	17.2	2.0	2.9	2.0	0.3	8.4
99028-50	1770	992245	7517.3	42.0	22.3	3.1	12.6	4.1	3.1	90.8
99028-85	2130	992246	6695.6	470.4	497.8	215.4	351.3	200.2	194.3	697.1
99028-104	2340	992247	6457.6	803.8	815.8	254.8	460.3	206.7	184.0	986.9
99028-128	2580	992248	37009.5	14885.4	7349.2	1517.8	1610.4	377.7	192.7	950.4
99028-139	2679	992249	51246.4	19322.2	10239.9	2908.5	2789.7	849.1	451.7	1753.1
99028-148	2760	992250	36144.0	14885.6	9339.8	2973.3	3386.6	1221.5	777.4	2985.3
99028-153	2805	992251	20217.4	8400.7	5741.0	1689.5	2111.6	728.0	449.8	1829.5

Table 2 Isotopic composition of gas samples from well 6508/1-1A

Sample	Depth m	IFE no GEO	C ₁	C ₂	C ₃	iC ₄	nC ₄	iC ₅	nC ₅	CO ₂
			$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB	$\delta^{13}\text{C}$ ‰ PDB
99028-16	1400	992244	-65.4	-	-	-	-	-	-	-
99028-50	1770	992245	-56.8	-	-	-	-	-	-	-
99028-85	2130	992246	-44.6	-27.1	-27.8	-28.3	-26.5	-25.8	-23.1	-16.0
99028-104	2340	992247	-39.9	-28.2	-28.3	-28.3	-26.8	-26.2	-23.9	-16.3
99028-128	2580	992248	-36.1	-28.7	-28.7	-29.9	-28.8	-28.3	-23.8	-11.7
99028-139	2679	992249	-36.2	-27.7	-29.4	-31.3	-32.0	-	-	-
99028-148	2760	992250	-34.5	-26.9	-27.8	-28.0	-28.5	-26.8	-	-22.9
99028-153	2805	992251	-27.2	-25.5	-26.4	-29.2	-27.8	-27.0	-23.4	-14.0