

Title
 Geochemical Evaluation of Well 34/7-28

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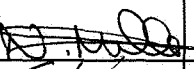

Abstract
 This report consists of a standard geochemical study on source rocks, thermal maturity and migrated hydrocarbons encountered in well 34/7-28.

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Classification:

- Open Saga and partners Internal Confidential Strictly confidential

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1 Introduction

The objectives of this study were to assess source rock potential of the sampled sections, evaluate thermal maturity evolution through the well and identify and characterise encountered migrated hydrocarbons. The samples analysed are listed in Table 1.1 and the screening and molecular characterisation methods used are shown in Table 1.2. Analytical procedures were carried out following "The Norwegian Industry Guide to Organic Geochemical Analyses" (3rd edition, 1993), with the exception of TOC and Rock-Eval measurements (see Table 1.2), which were performed using methods accredited by Saga. Vitrinite reflectance and gas isotope measurements were carried out by IFE, Kjeller, Norway. PyGC analysis was subcontracted by Robertson Research to LC² Chromatography Ltd. All other analytical work was performed at Robertson Research International Ltd., Llandudno, UK.

All depths listed in this report refer to measured depth RKB.

2 Samples

Well 34/7-28 was sampled from first sample return at 1310 mRKB to TD at 3005 mRKB. Wet samples were selected for analysis in the interval 1310 - 3005 mRKB (TD), in addition the cored Heather Formation (2668m to 2724.5mRKB) was sampled. Lithological descriptions of the ditch cutting samples selected for analysis are found in Table 2.1. The core section comprised a 56.5 metre sequence of Heather Formation mudstones and sandstones. The core contained 8 metres of Heather Formation shale followed by 16 metres of Heather Formation sandstone and then 32.5 metres Heather Formation shale to the base of the core. The sandstone sequence from 2676m to 2692mRKB was sampled for migrated hydrocarbons, whereas the mudstone sequence (2668m to 2676 mRKB and 2692.5m to 2724mRKB) was sampled for source rock analysis. The analyses of both oil shows and source rock potential are discussed below.

Table 1.1 ANALYTICAL PROGRAM

Well	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	Rock Eval Pyrolysis	Isotroscan	Pyrolysis GC	Visual Kerogen	Vitrinite Reflectance	Solvent Extraction	Asphaltene content	MPLC	Saturate GC	Aromatic GC	Saturate GC/MS	Aromatic GC/MS
34/7-28	98011-97	2689.10	2689.10	Core							X										
34/7-28	98011-69	2690.00	2690.00	Cuttings	X	X		X			X				X	X	X	X	X		
34/7-28	98011-109	2690.15	2690.15	Core					X	X											
34/7-28	98011-110	2690.70	2690.70	Core					X	X		X	X								
34/7-28	98011-98	2690.95	2690.95	Core							X				X	X	X	X	X		
34/7-28	98011-99	2692.30	2692.30	Core							X										
34/7-28	98011-111	2694.50	2694.50	Core					X	X											
34/7-28	98011-112	2696.05	2696.05	Core					X	X											
34/7-28	98011-113	2697.30	2697.30	Core					X	X											
34/7-28	98011-114	2698.70	2698.70	Core					X	X											
34/7-28	98011-70	2699.00	2699.00	Cuttings	X	X		X													
34/7-28	98011-115	2699.75	2699.75	Core					X	X		X	X								
34/7-28	98011-116	2700.95	2700.95	Core					X	X											
34/7-28	98011-117	2702.10	2702.10	Core					X	X											
34/7-28	98011-118	2704.40	2704.40	Core					X	X		X	X								
34/7-28	98011-119	2706.40	2706.40	Core					X	X											
34/7-28	98011-120	2707.90	2707.90	Core					X	X											
34/7-28	98011-71	2708.00	2708.00	Cuttings	X	X		X													
34/7-28	98011-121	2709.45	2709.45	Core					X	X		X	X	X							
34/7-28	98011-122	2711.10	2711.10	Core					X	X											
34/7-28	98011-123	2712.25	2712.25	Core					X	X											
34/7-28	98011-124	2713.85	2713.85	Core					X	X											
34/7-28	98011-125	2715.05	2715.05	Core					X	X											
34/7-28	98011-126	2716.20	2716.20	Core					X	X											
34/7-28	98011-127	2718.10	2718.10	Core					X	X											
34/7-28	98011-128	2719.80	2719.80	Core					X	X											
34/7-28	98011-129	2721.20	2721.20	Core					X	X		X	X								
34/7-28	98011-130	2723.80	2723.80	Core					X	X											
34/7-28	98011-131	2724.60	2724.60	Core					X	X											
34/7-28	98011-72	2726.00	2726.00	Cuttings	X	X		X	X	X											
34/7-28		2735.00	2735.00	Cuttings										X							
34/7-28	98011-73	2744.00	2744.00	Cuttings	X	X		X			X				X	X	X	X	X		
34/7-28	98011-74	2753.00	2753.00	Cuttings	X	X		X			X				X	X	X	X	X	X	X
34/7-28	98011-75	2771.00	2771.00	Cuttings	X	X		X	X	X											
34/7-28	98011-76	2780.00	2780.00	Cuttings	X	X		X			X				X	X	X	X	X		
34/7-28	98011-77	2807.00	2807.00	Cuttings	X	X	X	X													
34/7-28	98011-78	2825.00	2825.00	Cuttings	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X
34/7-28		2834.00	2834.00	Cuttings										X							
34/7-28	98011-79	2843.00	2843.00	Cuttings	X	X		X													
34/7-28	98011-80	2861.00	2861.00	Cuttings	X	X		X	X	X	X	X	X		X	X	X	X	X		
34/7-28	98011-81	2879.00	2879.00	Cuttings	X	X		X													
34/7-28	98011-82	2897.00	2897.00	Cuttings	X	X		X													
34/7-28	98011-83	2915.00	2915.00	Cuttings	X	X		X													
34/7-28	98011-84	2933.00	2933.00	Cuttings	X	X		X													
34/7-28		2924.00	2924.00	Cuttings										X							
34/7-28	98011-85	2951.00	2951.00	Cuttings	X	X		X	X	X											
34/7-28	98011-86	2969.00	2969.00	Cuttings	X	X		X			X				X	X	X	X	X	X	X
34/7-28	98011-87	2987.00	2987.00	Cuttings	X	X	X	X													
34/7-28	98011-88	3005.00	3005.00	Cuttings	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X

88 88 5 88 38 38 21 12 12 21 14 14 14 14 14 7 7

Table 1.2 EXPERIMENTAL PROCEDURES

ANALYSIS	INSTRUMENT	METHOD	TEMPERATURE PROGRAM	COLUMNS
Headspace gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
Occluded gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
TOC	Leco CS 125	OLS 1 *		
Rock Eval Pyrolysis	Rock Eval II	OLS 5 *	Cycle 1	
Quantitative Extraction	Soxhtec Tecator 1043	NPD method	Boil 1 hr, rinse 2hrs (DCM:MeOH, 7:1)	
Asphaltene precipitation		NPD method		
Iatroscan	Iatroscan Mk III	NPD method		
Hydrocarbon separation	Kontron HPLC	NPD method		Lobar Lichroprep Si60
Alkane GC	HP5890a (on column)	NPD method	50C 3min, 5C/min to 300C, 300C 20 min.	CP SIL-5 (30m)
Aromatic GC	AI 92	NPD method	80C 1min, 1C/min to 103C, 4C/min to 240C, 10C/min to 300C 20 min	CP SIL-8 (30m)
Pyrolysis GC **	HP5790	NPD method	30C, 6C/min to 300C, 300C 20 min.	GC-1 (30m)
Whole Oil GC	HP5890	NPD method	-10C, 10C/min to 300C, 300C 20 min.	CP SIL-5 (50m)
Alkane GC/MS	Finnegan 4000	NPD method	50C 1min, 15C/min to 210C, 2C/min to 300C 36 min.	DB-5MS (60m)
Aromatic GC/MS	Finnegan 4000	NPD method	100C 1min, 10C/min to 310C 15 min.	DB-5MS (60m)
Isotope analysis	sub contracted and run at Saga's request by IFE			

* - TOC and Rock Eval methods are comparable with NPD method. However we do not have Black Ven Marl. Consequently, the Rock Eval was calibrated with a standard related to Delsi IFP standard. In house check standards are run at greater frequency than prescribed in the NPD guidelines. Furthermore, both these methods are NAMAS accredited. Robertson Laboratories has been NAMAS accredited for the majority of its geochemical services since 1991. NAMAS, an organisation established by the UK government, has reciprocal agreements with Norske Veritas. NAMAS accreditation is specifically designed for laboratory testing and is broadly based on ISO 9001. Robertson Laboratories were audited by Saga (Audit no. SAGA-93-110) and its geochemical methods which are accredited by NAMAS were found to be satisfactory.

** - Pyrolysis GC analysis was subcontracted to LC² Chromatography Ltd.

Table 2.1 LITHOLOGY DESCRIPTIONS

Well	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology Descriptions
34/7-28	98011-1	1310.0	1310.0	Cuttings	Clyst, lt med gy + 20% Clyst, pk gy + 20% Clyst, med dk gy + mnr Lst, wht
34/7-28	98011-2	1330.0	1330.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt gy + mnr Clyst, pk gy, calc + mnr Slst, v lt gy + tr Lst, wht
34/7-28	98011-3	1350.0	1350.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Lst, wht
34/7-28	98011-4	1370.0	1370.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 10% Clyst, pk gy + tr Lst, wht
34/7-28	98011-5	1400.0	1400.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Clyst, pk gy
34/7-28	98011-6	1420.0	1420.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 10% Clyst, pk gy + tr Lst, wht
34/7-28	98011-7	1440.0	1440.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Clyst, pk gy
34/7-28	98011-8	1460.0	1460.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + mnr Clyst, pk gy + tr Lst, v lt gy
34/7-28	98011-9	1480.0	1480.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Clyst, pk gy
34/7-28	98011-10	1500.0	1500.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Clyst, pk gy
34/7-28	98011-11	1520.0	1520.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 10% Clyst, med gy + tr Clyst, pk gy
34/7-28	98011-12	1540.0	1540.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, med gy + tr Clyst, pk gy
34/7-28	98011-13	1560.0	1560.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, lt med gy + tr Clyst, v lt gy
34/7-28	98011-14	1580.0	1580.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, lt med gy + tr Clyst, v lt gy
34/7-28	98011-15	1610.0	1610.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, lt med gy + tr Lst, v pa org
34/7-28	98011-16	1630.0	1630.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-17	1650.0	1650.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-18	1670.0	1670.0	Cuttings	Clyst, brn gy + 20% Clyst, lt brn gy + tr Lst, pk gy
34/7-28	98011-19	1690.0	1690.0	Cuttings	Clyst, lt olv gy + 20% Clyst, lt med gy, calc + 10% Clyst, brn gy + tr Lst, pk gy
34/7-28	98011-20	1710.0	1710.0	Cuttings	Clyst, lt olv gy + 20% Clyst, lt med gy, calc + 10% Clyst, brn gy + tr Lst, pk gy
34/7-28	98011-21	1730.0	1730.0	Cuttings	Clyst, lt gy + 20% Clyst, lt med gy + 20% Clyst, lt olv gy + 10% Clyst, brn gy
34/7-28	98011-22	1750.0	1750.0	Cuttings	Clyst, lt gy + 20% Clyst, lt med gy + 20% Clyst, lt olv gy + 10% Clyst, brn gy
34/7-28	98011-23	1770.0	1770.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Lst, v pa org + tr Lst, v lt gy
34/7-28	98011-24	1790.0	1790.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Lst, v lt gy
34/7-28	98011-25	1810.0	1810.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Lst, v lt gy
34/7-28	98011-26	1830.0	1830.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Lst, v lt gy
34/7-28	98011-27	1850.0	1850.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Lst, v lt gy
34/7-28	98011-28	1870.0	1870.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 20% Clyst, brn gy + 10% Lst, v lt gy + tr Clyst, v dsky rd
34/7-28	98011-29	1890.0	1890.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 20% Clyst, brn gy + tr Lst, v lt gy
34/7-28	98011-30	1910.0	1910.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 20% Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-31	1930.0	1930.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-32	1950.0	1950.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 20% Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-33	1970.0	1970.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 10% Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-34	1990.0	1990.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy
34/7-28	98011-35	2010.0	2010.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy

Table 2.1 LITHOLOGY DESCRIPTIONS

Well	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology Descriptions
34/7-28	98011-36	2030.0	2030.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-37	2050.0	2050.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-38	2070.0	2070.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-39	2090.0	2090.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 10% Lst, v lt gy
34/7-28	98011-41	2130.0	2130.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy
34/7-28	98011-42	2150.0	2150.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy
34/7-28	98011-43	2170.0	2170.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-44	2190.0	2190.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-45	2210.0	2210.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 10% Lst, pa yel brn
34/7-28	98011-46	2230.0	2230.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-47	2250.0	2250.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy + tr Clyst, brn gy
34/7-28	98011-48	2270.0	2270.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 10% Lst, v lt gy
34/7-28	98011-49	2290.0	2290.0	Cuttings	Clyst, med dk gy, + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-50	2320.0	2320.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-51	2340.0	2340.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-52	2360.0	2360.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Lst, v lt gy
34/7-28	98011-53	2380.0	2380.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-54	2400.0	2400.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt gy + tr Lst, v lt gy
34/7-28	98011-55	2420.0	2420.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt gy + 10% Lst, v lt gy
34/7-28	98011-56	2440.0	2440.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt gy + 10% Lst, v lt gy
34/7-28	98011-57	2460.0	2460.0	Cuttings	Clyst, lt gy + 20% Clyst, med dk gy + mnr Lst, v lt gy
34/7-28	98011-58	2480.0	2480.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-59	2500.0	2500.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 10% Lst, v lt gy
34/7-28	98011-60	2520.0	2520.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-61	2540.0	2540.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-62	2560.0	2560.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-63	2580.0	2580.0	Cuttings	Clyst, med dk gy + 10% Clyst, lt med gy
34/7-28	98011-64	2600.0	2600.0	Cuttings	Clyst, med dk gy + 10% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-65	2620.0	2620.0	Cuttings	Clyst, med dk gy + 10% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-66	2640.0	2640.0	Cuttings	Clyst, med dk gy + 10% Clyst, lt med gy + tr Lst, v lt gy
34/7-28	98011-67	2660.0	2660.0	Cuttings	Lst, wht + 20% Lst, v lt gy + 20% Lst, lt gy + 10% Clyst, med dk gy + tr Lst, dk gy
34/7-28	98011-68	2681.0	2681.0	Cuttings	Lst, wht + 20% Lst, v lt gy + 20% Lst, lt gy + 10% Clyst, med dk gy + tr Lst, dk gy + tr paint
34/7-28	98011-69	2690.0	2690.0	Cuttings	Lst, wht + 20% Clyst, med dk gy + 10% Lst, dk gy + tr Lst, lt brn gy + tr Lst, lt gy + tr paint
34/7-28	98011-70	2699.0	2699.0	Cuttings	Clyst, dk gy, calc + 20% paint + tr Lst, lt brn gy + tr Lst, v lt gy
34/7-28	98011-71	2708.0	2708.0	Cuttings	Clyst, dk gy, calc + 20% paint + tr Lst, lt brn gy + tr Lst, v lt gy

Table 2.1 LITHOLOGY DESCRIPTIONS

Well	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology Descriptions
34/7-28	98011-72	2726.0	2726.0	Cuttings	Clyst, med dk gy + 20% Clyst, dk gy, calc + 10% Lst, lt gy + tr Lst, v lt gy + tr paint
34/7-28	98011-73	2744.0	2744.0	Cuttings	Clyst, dk gy, calc + 20% Clyst, brn gy + 10% Clyst, med dk gy + tr Lst, v lt gy + tr paint
34/7-28	98011-74	2753.0	2753.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Lst, v lt gy + tr paint
34/7-28	98011-75	2771.0	2771.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Lst, v lt gy + tr paint
34/7-28	98011-76	2780.0	2780.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn gy + tr Lst, v lt gy + tr Lst, wht
34/7-28	98011-77	2807.0	2807.0	Cuttings	Lst, v lt gy + 20% Clyst, brn gy + 10% Clyst, med dk gy
34/7-28	98011-78	2825.0	2825.0	Cuttings	Clyst, v lt gy + tr Clyst, lt gy + tr Clyst, med dk gy + tr Clyst, gy blk
34/7-28	98011-79	2843.0	2843.0	Cuttings	Clyst, pk gy + tr Clyst, lt gy + tr Clyst, med dk gy + tr Clyst, dk gy
34/7-28	98011-80	2861.0	2861.0	Cuttings	Clyst, pk gy + 20% Clyst, med dk gy + tr Clyst, lt gy + tr Clyst, dk gy
34/7-28	98011-81	2879.0	2879.0	Cuttings	Clyst, pk gy + tr Clyst, med dk gy + tr Clyst, gy blk
34/7-28	98011-82	2897.0	2897.0	Cuttings	Clyst, pk gy + tr Clyst, med dk gy + tr Clyst, gy blk
34/7-28	98011-83	2915.0	2915.0	Cuttings	Clyst, pk gy + tr Clyst, med dk gy + tr Clyst, gy blk
34/7-28	98011-84	2933.0	2933.0	Cuttings	Clyst, pk gy + tr Clyst, med dk gy + tr paint
34/7-28	98011-85	2951.0	2951.0	Cuttings	Clyst, pk gy + tr Clyst, med dk gy + tr Clyst, lt brn gy
34/7-28	98011-86	2969.0	2969.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt brn gy + 10% Clyst, pk gy + tr Clyst, dk gy
34/7-28	98011-87	2987.0	2987.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt brn gy + tr Clyst, pk gy + tr Clyst, dk gy
34/7-28	98011-88	3005.0	3005.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt brn gy + tr Clyst, pk gy + tr Clyst, dk gy

Table 3.1a Rock-Eval data

Well		Sample Name	Upper Depth	Lower Depth	Sample Type	S1 mg/g	TOC % wt	S2 mg/g	S3 mg/g	Tmax deg C	TOC % wt
34/7-28	NOR	98011-100	2668.00	2668.00	Core	2.44	11.7	43.43	1.02	420	11.7
34/7-28	NOR	98011-101	2670.00	2670.00	Core	1.38	8.67	24.61	0.54	424	8.67
34/7-28	NOR	98011-102	2672.00	2672.00	Core	1.24	8.96	19.44	0.95	423	8.96
34/7-28	NOR	98011-103	2673.20	2673.20	Core	0.43	0.3	0.59	0.73	427	0.3
34/7-28	NOR	98011-104	2674.05	2674.05	Core	1.7	14.7	19.31	1.25	425	14.7
34/7-28	NOR	98011-105	2675.90	2675.90	Core	0.99	11.3	32.41	1.18	428	11.3
34/7-28	NOR	98011-106	2679.55	2679.55	Core	1.8	15.15	30.47	1.41	420	15.15
34/7-28	NOR	98011-107	2686.10	2686.10	Core	0.98	11.2	15.02	0.85	422	11.2
34/7-28	NOR	98011-108	2686.95	2686.95	Core	1.76	12.4	14.6	1.17	432	12.4
34/7-28	NOR	98011-109	2690.15	2690.15	Core	1.41	9.84	10.54	0.94	433	9.84
34/7-28	NOR	98011-110	2690.70	2690.70	Core	1.3	10.3	9.32	0.88	431	10.3
34/7-28	NOR	98011-111	2694.50	2694.50	Core	0.37	4.46	3.39	1.49	438	4.46
34/7-28	NOR	98011-112	2696.05	2696.05	Core	0.7	6.65	4.64	1.21	439	6.65
34/7-28	NOR	98011-113	2697.30	2697.30	Core	0.53	5.69	6.8	0.87	436	5.69
34/7-28	NOR	98011-114	2698.70	2698.70	Core	0.34	4.28	9.89	1.15	433	4.28
34/7-28	NOR	98011-115	2699.75	2699.75	Core	0.47	6.41	16.4	1.34	430	6.41
34/7-28	NOR	98011-116	2700.95	2700.95	Core	0.41	4.98	4.46	1.51	436	4.98
34/7-28	NOR	98011-117	2702.10	2702.10	Core	0.23	3.1	3.9	1.3	438	3.1
34/7-28	NOR	98011-118	2704.40	2704.40	Core	0.4	6.29	2.75	1.29	438	6.29
34/7-28	NOR	98011-119	2706.40	2706.40	Core	0.4	5.09	2.38	1.13	438	5.09
34/7-28	NOR	98011-120	2707.90	2707.90	Core	0.09	0.75	0.27	1.45	424	0.75
34/7-28	NOR	98011-121	2709.45	2709.45	Core	1.03	12.2	7.14	1.16	436	12.2
34/7-28	NOR	98011-122	2711.10	2711.10	Core	0.18	3.33	1.55	1.23	437	3.33
34/7-28	NOR	98011-123	2712.25	2712.25	Core	0.14	2.16	1.23	1.11	433	2.16
34/7-28	NOR	98011-124	2713.85	2713.85	Core	0.13	1.78	0.97	0.98	433	1.78
34/7-28	NOR	98011-125	2715.05	2715.05	Core	0.16	1.09	0.53	0.56	433	1.09
34/7-28	NOR	98011-126	2716.20	2716.20	Core	0.12	0.93	0.24	0.45	388	0.93
34/7-28	NOR	98011-127	2718.10	2718.10	Core	0.11	1.24	1.04	0.22	431	1.24
34/7-28	NOR	98011-128	2719.80	2719.80	Core	0.13	1.6	2.14	0.29	434	1.6
34/7-28	NOR	98011-129	2721.20	2721.20	Core	0.39	2.68	6.16	0.46	432	2.68
34/7-28	NOR	98011-130	2723.80	2723.80	Core	0.08	1.3	2.33	0.23	428	1.3
34/7-28	NOR	98011-131	2724.60	2724.60	Core	0.23	1.47	2.5	0.72	430	1.47
34/7-28	NOR	98011-72	2726.00	2726.00	Cuttings	0.75	2.09	3.68	3.16	430	2.09
34/7-28	NOR	98011-75	2771.00	2771.00	Cuttings	0.90	2.08	3.27	2.74	430	2.08
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	0.52	0.79	1.58	1.47	436	0.79
34/7-28	NOR	98011-80	2861.00	2861.00	Cuttings	0.34	0.79	1.56	1.48	439	0.79
34/7-28	NOR	98011-85	2951.00	2951.00	Cuttings	0.26	0.40	0.54	1.67	428	0.40
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	0.61	1.60	2.49	1.31	434	1.60

Table 3.1b Rock-Eval data

Well		Sample	Upper	Lower	Sample	Hydrogen	Production	Production
		Name	Depth	Depth	Type	Indices	Indices	Potential
34/7-28	NOR	98011-100	2668.00	2668.00	Core	371	0.1	45.87
34/7-28	NOR	98011-101	2670.00	2670.00	Core	284	0.1	25.99
34/7-28	NOR	98011-102	2672.00	2672.00	Core	217	0.1	20.68
34/7-28	NOR	98011-103	2673.20	2673.20	Core	197	0.4	1.02
34/7-28	NOR	98011-104	2674.05	2674.05	Core	131	0.1	21.01
34/7-28	NOR	98011-105	2675.90	2675.90	Core	287	0.0	33.4
34/7-28	NOR	98011-106	2679.55	2679.55	Core	201	0.1	32.27
34/7-28	NOR	98011-107	2686.10	2686.10	Core	134	0.1	16
34/7-28	NOR	98011-108	2686.95	2686.95	Core	118	0.1	16.36
34/7-28	NOR	98011-109	2690.15	2690.15	Core	107	0.1	11.95
34/7-28	NOR	98011-110	2690.70	2690.70	Core	90	0.1	10.62
34/7-28	NOR	98011-111	2694.50	2694.50	Core	76	0.1	3.76
34/7-28	NOR	98011-112	2696.05	2696.05	Core	70	0.1	5.34
34/7-28	NOR	98011-113	2697.30	2697.30	Core	120	0.1	7.33
34/7-28	NOR	98011-114	2698.70	2698.70	Core	231	0.0	10.23
34/7-28	NOR	98011-115	2699.75	2699.75	Core	256	0.0	16.87
34/7-28	NOR	98011-116	2700.95	2700.95	Core	90	0.1	4.87
34/7-28	NOR	98011-117	2702.10	2702.10	Core	126	0.1	4.13
34/7-28	NOR	98011-118	2704.40	2704.40	Core	44	0.1	3.15
34/7-28	NOR	98011-119	2706.40	2706.40	Core	47	0.1	2.78
34/7-28	NOR	98011-120	2707.90	2707.90	Core	36	0.3	0.36
34/7-28	NOR	98011-121	2709.45	2709.45	Core	59	0.1	8.17
34/7-28	NOR	98011-122	2711.10	2711.10	Core	47	0.1	1.73
34/7-28	NOR	98011-123	2712.25	2712.25	Core	57	0.1	1.37
34/7-28	NOR	98011-124	2713.85	2713.85	Core	54	0.1	1.1
34/7-28	NOR	98011-125	2715.05	2715.05	Core	49	0.2	0.69
34/7-28	NOR	98011-126	2716.20	2716.20	Core	26	0.3	0.36
34/7-28	NOR	98011-127	2718.10	2718.10	Core	84	0.1	1.15
34/7-28	NOR	98011-128	2719.80	2719.80	Core	134	0.1	2.27
34/7-28	NOR	98011-129	2721.20	2721.20	Core	230	0.1	6.55
34/7-28	NOR	98011-130	2723.80	2723.80	Core	179	0.0	2.41
34/7-28	NOR	98011-131	2724.60	2724.60	Core	170	0.1	2.73
34/7-28	NOR	98011-72	2726.00	2726.00	Cuttings	176	0.2	4.43
34/7-28	NOR	98011-75	2771.00	2771.00	Cuttings	157	0.2	4.17
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	200	0.2	2.1
34/7-28	NOR	98011-80	2861.00	2861.00	Cuttings	197	0.2	1.9
34/7-28	NOR	98011-85	2951.00	2951.00	Cuttings	135	0.3	0.8
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	156	0.2	3.1

Table 3.2 Maturity and kerogen composition data

Sample Depth	Sample type	Spore colouration index	Inertinite	Vitrinite	Sapropel
2668	Core	4	30	Mnr	70
2672	Core	4	60	Mnr	40
2679.5	Core	3.5	60	Mnr	40
2686.1	Core	3.5	90	Mnr	10
2690.7	Core	4.5	95	Mnr	5
2699.7	Core	4	35	30	35
2704.4	Core	4	80	10	10
2709.4	Core	4?	90	10	Prt
2721.2	Core	3.5	15	20	65
2825	Core	4	15	20	65
2861	Core	4.5	20	30	50
3005	Core	4.5	20	60	20

Table 3.3 Pyrolysis GC Peak Area Data

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 %	C2-C5 %	C6-14 %	C15+ %
34/7-28	NOR	98011-100	2668.0	2668.0	Core	3.3	8.3	40.3	48.1
34/7-28	NOR	98011-102	2672.0	2672.0	Core	3.0	11.6	45.1	40.3
34/7-28	NOR	98011-106	2679.6	2679.6	Core	6.3	14.1	42.6	37.1
34/7-28	NOR	98011-107	2686.1	2686.1	Core	5.1	11.7	41.1	42.1
34/7-28	NOR	98011-110	2690.7	2690.7	Core	9.2	22.0	57.3	11.4
34/7-28	NOR	98011-115	2699.8	2699.8	Core	7.4	18.4	50.1	24.2
34/7-28	NOR	98011-118	2704.4	2704.4	Core	12.5	30.4	53.0	4.1
34/7-28	NOR	98011-121	2709.5	2709.5	Core	5.3	21.4	46.2	27.1
34/7-28	NOR	98011-129	2721.2	2721.2	Core	4.8	18.2	51.8	25.1
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings	5.8	22.1	47.7	24.4
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings	5.8	19.5	62.3	12.4
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings	7.0	18.1	61.6	13.3

Table 4.1 HEADSPACE GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-1	1310.0	1310.0	Cuttings	2024.1	1.4	1.0	0.1	0.2	3.4
34/7-28	98011-2	1330.0	1330.0	Cuttings	808.9	1.3	0.0	0.0	0.0	0.7
34/7-28	98011-3	1350.0	1350.0	Cuttings	388.7	0.5	0.1	0.0	0.0	0.1
34/7-28	98011-4	1370.0	1370.0	Cuttings	3563.0	4.7	2.1	0.0	0.4	1.8
34/7-28	98011-5	1400.0	1400.0	Cuttings	3715.6	6.4	2.6	0.0	0.0	1.5
34/7-28	98011-6	1420.0	1420.0	Cuttings	2861.5	9.8	2.2	0.0	0.0	1.1
34/7-28	98011-7	1440.0	1440.0	Cuttings	3161.7	16.6	3.6	0.0	0.0	1.4
34/7-28	98011-8	1460.0	1460.0	Cuttings	2226.3	14.7	3.0	0.0	0.0	0.9
34/7-28	98011-9	1480.0	1480.0	Cuttings	2742.4	20.1	2.3	0.0	0.0	1.3
34/7-28	98011-10	1500.0	1500.0	Cuttings	3679.5	31.1	5.0	0.8	1.3	3.5
34/7-28	98011-11	1520.0	1520.0	Cuttings	2998.4	4.1	0.6	0.6	0.0	2.1
34/7-28	98011-12	1540.0	1540.0	Cuttings	4620.3	35.0	4.1	1.1	1.5	3.2
34/7-28	98011-13	1560.0	1560.0	Cuttings	4685.1	39.9	3.9	1.2	1.4	1.8
34/7-28	98011-14	1580.0	1580.0	Cuttings	3575.8	39.1	5.4	1.5	0.8	2.3
34/7-28	98011-15	1610.0	1610.0	Cuttings	4419.9	54.7	7.7	2.5	1.4	4.1
34/7-28	98011-16	1630.0	1630.0	Cuttings	6920.1	122.8	32.6	0.0	0.0	6.0
34/7-28	98011-17	1650.0	1650.0	Cuttings	3259.2	46.7	9.4	0.0	0.0	13.0
34/7-28	98011-18	1670.0	1670.0	Cuttings	2836.6	55.2	23.4	0.0	0.0	7.9
34/7-28	98011-19	1690.0	1690.0	Cuttings	2333.5	44.1	13.7	0.0	0.0	1.9
34/7-28	98011-20	1710.0	1710.0	Cuttings	8196.0	154.2	12.2	0.0	0.0	2.3
34/7-28	98011-21	1730.0	1730.0	Cuttings	3087.1	64.4	5.7	0.0	0.0	1.6
34/7-28	98011-22	1750.0	1750.0	Cuttings	2897.0	72.7	6.7	0.0	0.0	0.0
34/7-28	98011-23	1770.0	1770.0	Cuttings	3398.7	80.8	0.0	0.0	0.0	0.0
34/7-28	98011-24	1790.0	1790.0	Cuttings	2285.4	67.3	7.6	4.5	0.8	2.9
34/7-28	98011-25	1810.0	1810.0	Cuttings	3900.0	97.3	12.3	8.6	1.0	8.3
34/7-28	98011-26	1830.0	1830.0	Cuttings	5623.3	117.5	17.5	14.1	1.8	15.4
34/7-28	98011-27	1850.0	1850.0	Cuttings	2978.9	58.4	9.4	6.9	2.0	8.0
34/7-28	98011-28	1870.0	1870.0	Cuttings	5227.9	95.8	14.1	9.1	2.9	13.3
34/7-28	98011-29	1890.0	1890.0	Cuttings	2078.5	33.4	8.4	6.5	2.3	12.7
34/7-28	98011-30	1910.0	1910.0	Cuttings	2349.8	43.4	13.9	7.9	4.1	16.1
34/7-28	98011-31	1930.0	1930.0	Cuttings	1175.5	30.9	8.2	6.4	2.7	8.3
34/7-28	98011-32	1950.0	1950.0	Cuttings	1796.2	50.2	16.4	9.7	4.8	14.8
34/7-28	98011-33	1970.0	1970.0	Cuttings	4215.7	95.7	25.8	12.2	7.8	22.8
34/7-28	98011-34	1990.0	1990.0	Cuttings	3834.0	101.2	29.9	13.0	7.4	24.0
34/7-28	98011-35	2010.0	2010.0	Cuttings	2923.7	99.0	33.2	16.0	8.7	25.6

Table 4.1 HEADSPACE GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-36	2030.0	2030.0	Cuttings	3506.0	121.6	40.4	19.4	11.3	24.1
34/7-28	98011-37	2050.0	2050.0	Cuttings	2194.7	86.4	35.1	16.6	9.2	22.2
34/7-28	98011-38	2070.0	2070.0	Cuttings	2625.2	125.1	43.2	17.1	9.7	21.3
34/7-28	98011-39	2090.0	2090.0	Cuttings	1985.6	88.8	32.2	12.4	7.3	17.2
34/7-28	98011-40	2110.0	2110.0	Cuttings	EMPTY CAN					
34/7-28	98011-41	2130.0	2130.0	Cuttings	6292.9	191.6	58.6	19.4	10.5	29.1
34/7-28	98011-42	2150.0	2150.0	Cuttings	7041.7	284.4	95.5	33.5	19.9	37.9
34/7-28	98011-43	2170.0	2170.0	Cuttings	159.7	4.4	1.9	0.0	0.0	0.9
34/7-28	98011-44	2190.0	2190.0	Cuttings	2780.4	159.5	80.7	26.9	21.3	60.5
34/7-28	98011-45	2210.0	2210.0	Cuttings	576.3	46.4	34.8	12.9	14.9	72.5
34/7-28	98011-46	2230.0	2230.0	Cuttings	5654.2	478.1	238.5	91.4	55.2	504.6
34/7-28	98011-47	2250.0	2250.0	Cuttings	5367.3	406.3	224.8	80.9	65.1	443.9
34/7-28	98011-48	2270.0	2270.0	Cuttings	4833.0	591.4	321.7	120.9	75.1	242.6
34/7-28	98011-49	2290.0	2290.0	Cuttings	3408.6	426.9	217.3	71.7	42.5	121.3
34/7-28	98011-50	2320.0	2320.0	Cuttings	3073.3	550.7	328.1	112.8	69.3	180.4
34/7-28	98011-51	2340.0	2340.0	Cuttings	3269.1	551.7	317.0	100.6	61.2	138.1
34/7-28	98011-52	2360.0	2360.0	Cuttings	4214.6	621.8	420.6	123.7	94.0	278.1
34/7-28	98011-53	2380.0	2380.0	Cuttings	5988.4	925.4	566.2	150.6	105.0	270.0
34/7-28	98011-54	2400.0	2400.0	Cuttings	7076.1	1129.0	780.7	197.6	158.2	424.9
34/7-28	98011-55	2420.0	2420.0	Cuttings	6188.0	978.4	669.6	150.7	127.9	367.5
34/7-28	98011-56	2440.0	2440.0	Cuttings	4848.8	949.7	668.8	147.0	114.9	275.4
34/7-28	98011-57	2460.0	2460.0	Cuttings	6355.9	1260.5	974.0	200.3	180.3	381.9
34/7-28	98011-58	2480.0	2480.0	Cuttings	11444.1	1963.4	1848.7	381.9	384.1	698.2
34/7-28	98011-59	2500.0	2500.0	Cuttings	2638.7	640.4	609.8	121.7	119.4	117.6
34/7-28	98011-60	2520.0	2520.0	Cuttings	1388.0	240.8	274.7	52.4	65.1	48.7
34/7-28	98011-61	2540.0	2540.0	Cuttings	2444.9	498.3	638.6	125.4	179.1	107.1
34/7-28	98011-62	2560.0	2560.0	Cuttings	3021.0	687.2	947.1	175.8	264.5	118.4
34/7-28	98011-63	2580.0	2580.0	Cuttings	4168.0	885.9	1223.1	224.9	389.5	181.6
34/7-28	98011-64	2600.0	2600.0	Cuttings	3521.2	878.4	1263.8	247.1	453.5	217.7
34/7-28	98011-65	2620.0	2620.0	Cuttings	4443.0	1032.6	1502.9	321.1	648.6	375.7
34/7-28	98011-66	2640.0	2640.0	Cuttings	1848.9	724.5	1447.3	339.2	813.9	667.7
34/7-28	98011-67	2660.0	2660.0	Cuttings	2368.3	615.6	945.4	211.4	526.5	521.8
34/7-28	98011-68	2681.0	2681.0	Cuttings	24047.0	10245.8	9436.3	2585.7	4097.8	3253.4
34/7-28	98011-69	2690.0	2690.0	Cuttings	12649.9	5267.9	4493.9	1171.3	1699.8	1338.5
34/7-28	98011-70	2699.0	2699.0	Cuttings	9657.1	4307.7	4077.4	902.8	1280.4	977.1

Table 4.1 HEADSPACE GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-71	2708.0	2708.0	Cuttings	12576.4	4267.8	3455.1	883.4	1100.9	883.3
34/7-28	98011-72	2726.0	2726.0	Cuttings	9784.0	3799.1	3138.9	682.4	973.5	617.3
34/7-28	98011-73	2744.0	2744.0	Cuttings	12372.9	5211.8	4691.9	1135.1	1614.8	965.3
34/7-28	98011-74	2753.0	2753.0	Cuttings	34712.0	17891.1	16548.0	3060.2	4935.2	2693.9
34/7-28	98011-75	2771.0	2771.0	Cuttings	23063.6	11047.6	12253.1	2378.5	4292.0	2719.8
34/7-28	98011-76	2780.0	2780.0	Cuttings	23860.1	12980.3	14451.7	3161.5	5839.9	3521.4
34/7-28	98011-77	2807.0	2807.0	Cuttings	29964.6	17202.2	20733.3	3851.0	8958.9	7328.1
34/7-28	98011-78	2825.0	2825.0	Cuttings	5606.9	2880.8	4473.2	730.8	1946.8	2121.1
34/7-28	98011-79	2843.0	2843.0	Cuttings	5031.1	2567.6	3883.8	663.0	1729.8	1675.8
34/7-28	98011-80	2861.0	2861.0	Cuttings	9158.9	4382.1	5418.0	1049.6	2335.5	1962.8
34/7-28	98011-81	2879.0	2879.0	Cuttings	2482.1	1389.4	2219.7	345.8	901.6	940.2
34/7-28	98011-82	2897.0	2897.0	Cuttings	3673.6	2090.9	2869.3	459.0	1087.8	1036.4
34/7-28	98011-83	2915.0	2915.0	Cuttings	1112.3	543.4	1098.0	194.3	523.3	623.0
34/7-28	98011-84	2933.0	2933.0	Cuttings	2336.3	726.3	1138.7	187.7	486.2	526.9
34/7-28	98011-85	2951.0	2951.0	Cuttings	2607.1	1316.6	1965.8	377.1	940.1	894.9
34/7-28	98011-86	2969.0	2969.0	Cuttings	6088.6	3461.7	4204.9	836.5	1739.8	1120.4
34/7-28	98011-87	2987.0	2987.0	Cuttings	7705.4	4580.3	5133.0	1144.5	1930.8	985.4
34/7-28	98011-88	3005.0	3005.0	Cuttings	4774.5	3261.0	5640.8	877.8	1771.6	1252.9

Table 4.2 OCCLUDED GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-1	1310.0	1310.0	Cuttings	18.6	1.5	0.8	0.0	0.0	7.1
34/7-28	98011-2	1330.0	1330.0	Cuttings	10.5	0.0	0.0	0.0	0.0	8.5
34/7-28	98011-3	1350.0	1350.0	Cuttings	10.9	0.0	0.0	0.0	0.0	0.0
34/7-28	98011-4	1370.0	1370.0	Cuttings	12.4	0.7	0.0	0.0	0.0	9.8
34/7-28	98011-5	1400.0	1400.0	Cuttings	8.8	1.1	0.5	0.0	0.0	8.1
34/7-28	98011-6	1420.0	1420.0	Cuttings	9.4	0.0	0.0	0.0	0.0	8.2
34/7-28	98011-7	1440.0	1440.0	Cuttings	7.5	0.0	0.0	0.0	0.0	12.8
34/7-28	98011-8	1460.0	1460.0	Cuttings	12.4	1.1	2.0	0.0	0.0	19.9
34/7-28	98011-9	1480.0	1480.0	Cuttings	11.6	2.4	4.7	0.0	1.7	17.7
34/7-28	98011-10	1500.0	1500.0	Cuttings	8.6	1.8	4.7	0.0	0.0	17.4
34/7-28	98011-11	1520.0	1520.0	Cuttings	15.4	5.4	2.9	0.0	1.4	40.2
34/7-28	98011-12	1540.0	1540.0	Cuttings	10.3	1.7	1.7	0.0	0.0	20.5
34/7-28	98011-13	1560.0	1560.0	Cuttings	9.6	1.4	0.7	0.0	0.0	8.8
34/7-28	98011-14	1580.0	1580.0	Cuttings	7.5	0.0	0.0	0.0	0.0	9.9
34/7-28	98011-15	1610.0	1610.0	Cuttings	8.3	0.0	0.0	0.0	0.0	5.8
34/7-28	98011-16	1630.0	1630.0	Cuttings	14.6	1.0	1.8	2.4	2.0	15.8
34/7-28	98011-17	1650.0	1650.0	Cuttings	15.0	0.0	0.0	0.0	0.0	12.0
34/7-28	98011-18	1670.0	1670.0	Cuttings	5.5	0.0	0.0	0.0	0.0	11.4
34/7-28	98011-19	1690.0	1690.0	Cuttings	17.8	0.0	0.0	0.0	0.0	7.2
34/7-28	98011-20	1710.0	1710.0	Cuttings	14.8	0.0	0.0	0.0	0.0	5.2
34/7-28	98011-21	1730.0	1730.0	Cuttings	14.0	0.0	0.0	0.0	0.0	7.2
34/7-28	98011-22	1750.0	1750.0	Cuttings	13.5	0.0	0.0	0.0	0.0	5.8
34/7-28	98011-23	1770.0	1770.0	Cuttings	16.8	0.0	0.0	0.0	0.0	9.2
34/7-28	98011-24	1790.0	1790.0	Cuttings	18.2	0.0	0.0	0.0	0.0	7.9
34/7-28	98011-25	1810.0	1810.0	Cuttings	5.0	0.0	0.0	0.0	0.0	9.2
34/7-28	98011-26	1830.0	1830.0	Cuttings	19.6	2.3	0.0	0.0	0.0	19.3
34/7-28	98011-27	1850.0	1850.0	Cuttings	16.9	0.8	0.0	0.0	0.0	12.8
34/7-28	98011-28	1870.0	1870.0	Cuttings	14.1	0.7	0.0	0.0	0.0	8.5
34/7-28	98011-29	1890.0	1890.0	Cuttings	13.7	0.0	0.0	0.0	0.0	6.1
34/7-28	98011-30	1910.0	1910.0	Cuttings	16.2	0.9	0.0	0.0	0.0	12.1
34/7-28	98011-31	1930.0	1930.0	Cuttings	19.4	0.0	0.0	0.0	0.0	9.5
34/7-28	98011-32	1950.0	1950.0	Cuttings	12.1	0.0	0.0	0.0	0.0	16.2
34/7-28	98011-33	1970.0	1970.0	Cuttings	13.3	0.0	0.0	0.0	0.0	16.3
34/7-28	98011-34	1990.0	1990.0	Cuttings	15.8	0.0	2.5	0.0	0.0	24.4

Table 4.2 OCCLUDED GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-35	2010.0	2010.0	Cuttings	23.2	1.2	1.7	1.4	1.3	47.1
34/7-28	98011-36	2030.0	2030.0	Cuttings	21.8	3.7	3.8	0.8	2.5	55.8
34/7-28	98011-37	2050.0	2050.0	Cuttings	29.6	2.6	3.2	0.0	0.0	34.4
34/7-28	98011-38	2070.0	2070.0	Cuttings	19.0	2.0	1.7	1.3	1.3	27.9
34/7-28	98011-39	2090.0	2090.0	Cuttings	22.1	0.0	1.2	0.0	0.0	22.0
34/7-28	98011-40	2110.0	2110.0	Cuttings	EMPTY CAN					
34/7-28	98011-41	2130.0	2130.0	Cuttings	24.0	0.9	2.0	0.0	0.0	20.5
34/7-28	98011-42	2150.0	2150.0	Cuttings	15.8	0.0	0.0	0.0	0.0	20.2
34/7-28	98011-43	2170.0	2170.0	Cuttings	15.1	1.1	5.2	1.7	1.7	25.9
34/7-28	98011-44	2190.0	2190.0	Cuttings	7.0	0.0	0.0	0.0	0.0	16.7
34/7-28	98011-45	2210.0	2210.0	Cuttings	12.9	1.4	1.7	0.0	0.6	56.8
34/7-28	98011-46	2230.0	2230.0	Cuttings	32.5	2.4	4.8	1.6	3.8	597.1
34/7-28	98011-47	2250.0	2250.0	Cuttings	26.9	1.7	4.0	1.4	2.6	284.2
34/7-28	98011-48	2270.0	2270.0	Cuttings	39.1	4.4	5.9	1.5	5.8	195.4
34/7-28	98011-49	2290.0	2290.0	Cuttings	14.3	3.1	11.4	5.1	6.8	152.9
34/7-28	98011-50	2320.0	2320.0	Cuttings	10.4	3.2	11.8	5.5	8.5	203.0
34/7-28	98011-51	2340.0	2340.0	Cuttings	12.2	4.3	11.3	4.3	7.2	127.6
34/7-28	98011-52	2360.0	2360.0	Cuttings	10.1	1.6	5.5	2.1	4.7	160.3
34/7-28	98011-53	2380.0	2380.0	Cuttings	55.2	5.0	17.2	8.8	16.2	226.9
34/7-28	98011-54	2400.0	2400.0	Cuttings	26.7	6.4	21.8	10.2	19.9	302.1
34/7-28	98011-55	2420.0	2420.0	Cuttings	8.1	1.6	14.3	9.0	13.4	249.5
34/7-28	98011-56	2440.0	2440.0	Cuttings	35.6	9.4	28.8	11.2	22.4	326.0
34/7-28	98011-57	2460.0	2460.0	Cuttings	13.9	2.4	19.3	6.8	13.9	139.4
34/7-28	98011-58	2480.0	2480.0	Cuttings	10.9	3.9	5.8	2.0	5.8	64.6
34/7-28	98011-59	2500.0	2500.0	Cuttings	14.1	1.6	13.6	3.5	12.4	47.0
34/7-28	98011-60	2520.0	2520.0	Cuttings	16.1	4.6	5.6	1.5	6.2	42.2
34/7-28	98011-61	2540.0	2540.0	Cuttings	16.4	2.2	7.2	3.2	9.7	32.7
34/7-28	98011-62	2560.0	2560.0	Cuttings	14.1	1.7	6.9	2.6	8.7	33.5
34/7-28	98011-63	2580.0	2580.0	Cuttings	15.9	2.1	9.0	3.7	11.9	37.6
34/7-28	98011-64	2600.0	2600.0	Cuttings	14.3	3.1	16.4	5.8	23.0	47.7
34/7-28	98011-65	2620.0	2620.0	Cuttings	18.5	1.0	12.0	4.7	24.7	94.2
34/7-28	98011-66	2640.0	2640.0	Cuttings	14.9	2.1	12.6	4.7	28.6	99.2
34/7-28	98011-67	2660.0	2660.0	Cuttings	10.4	1.5	1.9	1.1	5.6	96.3
34/7-28	98011-68	2681.0	2681.0	Cuttings	13.3	4.3	19.6	5.7	17.6	37.5

Table 4.2 OCCLUDED GAS DATA

Well Name	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock
34/7-28	98011-69	2690.0	2690.0	Cuttings	145.2	744.3	1871.6	409.5	1188.2	2018.0
34/7-28	98011-70	2699.0	2699.0	Cuttings	104.1	527.6	1381.6	328.8	855.7	1053.3
34/7-28	98011-71	2708.0	2708.0	Cuttings	34.0	95.3	158.3	28.7	66.0	58.1
34/7-28	98011-72	2726.0	2726.0	Cuttings	53.2	328.0	1116.4	203.3	616.0	665.8
34/7-28	98011-73	2744.0	2744.0	Cuttings	119.9	660.8	2747.6	650.8	1542.2	1550.8
34/7-28	98011-74	2753.0	2753.0	Cuttings	43.9	388.5	2284.9	524.5	1314.8	1269.0
34/7-28	98011-75	2771.0	2771.0	Cuttings	40.8	81.5	843.7	256.2	853.5	698.2
34/7-28	98011-76	2780.0	2780.0	Cuttings	29.8	130.4	791.3	176.6	649.9	789.3
34/7-28	98011-77	2807.0	2807.0	Cuttings	43.3	31.1	305.3	78.3	468.6	1335.6
34/7-28	98011-78	2825.0	2825.0	Cuttings	22.6	13.5	117.6	43.1	216.5	765.2
34/7-28	98011-79	2843.0	2843.0	Cuttings	24.1	7.4	52.3	13.3	92.9	485.3
34/7-28	98011-80	2861.0	2861.0	Cuttings	28.7	23.9	233.8	73.9	310.1	823.4
34/7-28	98011-81	2879.0	2879.0	Cuttings	35.5	5.4	29.3	8.2	65.9	447.0
34/7-28	98011-82	2897.0	2897.0	Cuttings	35.8	7.7	65.0	29.7	157.1	702.5
34/7-28	98011-83	2915.0	2915.0	Cuttings	18.1	5.3	12.3	4.0	20.5	135.6
34/7-28	98011-84	2933.0	2933.0	Cuttings	24.0	8.5	34.2	19.9	85.6	404.6
34/7-28	98011-85	2951.0	2951.0	Cuttings	29.4	5.1	16.8	5.8	33.3	210.7
34/7-28	98011-86	2969.0	2969.0	Cuttings	34.9	42.1	313.0	95.4	421.0	1227.3
34/7-28	98011-87	2987.0	2987.0	Cuttings	58.5	168.7	1284.4	423.3	1238.7	1307.1
34/7-28	98011-88	3005.0	3005.0	Cuttings	45.0	15.5	177.9	75.4	311.9	658.5

Table 4.3 Gas Isotope data

Sample	IFE no GEO	C1 delC13 PDB	C2 delC13 PDB	C3 delC13 PDB	iC4 delC13 PDB	C4 delC13 PDB	iC5 delC13 PDB	C5 delC13 PDB	C02 delC13 PDB
98011-62	980764	-50.3	-33.6	-32.6	-34.5	-34.2			-18.6
98011-66	980765	-49.3	-33.4	-32.4	-34.5	-32.8	-29.7	-30.8	-20.9
98011-68	980766	-41.4	-30.7	-30.1	-31.1	-29.9	-30.4	-31.2	-20.4
98011-77	980767	-45.8	-32.2	-31.4	-32.3	-30.6	-30	-30.4	-18.1
98011-87	980768	-44.2	-32	-31.4	-31.4	-30.4			-20

Table 4.4 Extraction and Iatroscan fractionation data

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	Rock Wt (Gm)	Extract Yield (mg/g)	Sats (mg/g)	Aroms (mg/g)	NSO (mg/g)	Polar (mg/g)
34/7-28	NOR	98011-63	2580.0	2580.0	Cuttings		20.0	3.9	0.1	0.1		3.7
34/7-28	NOR	98011-67	2660.0	2660.0	Cuttings		20.0	1.2	0.0	0.0		1.1
34/7-28	NOR	98011-69	2690.0	2690.0	Cuttings		20.0	5.3	0.2	0.4		4.7
34/7-28	NOR	98011-73	2744.0	2744.0	Cuttings		19.5	9.4	0.3	0.7		8.4
34/7-28	NOR	98011-74	2753.0	2753.0	Cuttings		20.0	9.9	0.5	0.9		8.5
34/7-28	NOR	98011-76	2780.0	2780.0	Cuttings		20.0	6.4	0.1	0.5		5.8
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings		16.5	2.6	0.1	0.2		2.3
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings		20.0	1.5	0.1	0.1		1.3
34/7-28	NOR	98011-86	2969.0	2969.0	Cuttings		18.0	2.8	0.1	0.2		2.5
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings		18.0	2.1	0.1	0.2		1.8
34/7-28	NOR	98011-89	2672.1	2672.1	Core		10.0	1.0	0.1	0.1		0.9
34/7-28	NOR	98011-90	2674.5	2674.5	Core		10.0	2.1	0.1	0.1		1.9
34/7-28	NOR	98011-91	2676.1	2676.1	Core		10.0	2.4	0.0	0.1		2.3
34/7-28	NOR	98011-92	2678.5	2678.5	Core		10.0	2.0	0.0	0.1		1.9
34/7-28	NOR	98011-93	2679.8	2679.8	Core		10.0	3.2	0.1	0.2		2.9
34/7-28	NOR	98011-94	2682.6	2682.6	Core		10.0	1.6	0.0	0.1		1.5
34/7-28	NOR	98011-95	2685.5	2685.5	Core		10.0	1.2	0.0	0.0		1.2
34/7-28	NOR	98011-96	2687.1	2687.1	Core		10.0	1.9	0.0	0.0		1.8
34/7-28	NOR	98011-97	2689.1	2689.1	Core		10.0	1.6	0.0	0.0		1.5
34/7-28	NOR	98011-98	2691.0	2691.0	Core		10.0	2.3	0.1	0.1		2.2
34/7-28	NOR	98011-99	2692.3	2692.3	Core		10.0	0.8	0.0	0.1		0.7

Table 4.5 Extraction and Liquid Chromatography Data

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	Rock Wt (Gm)	Extract Yield (mg/g)	SAT mg/g	ARO mg/g	NSO mg/g	Asph mg/g	Polars mg/g
34/7-28	NOR	98011-63	2580.0	2580.0	Cuttings		20.0	3.9	0.01	0.04	3.35	0.53	3.88
34/7-28	NOR	98011-67	2660.0	2660.0	Cuttings		20.0	1.2	0.01	0.01	0.77	0.39	1.16
34/7-28	NOR	98011-90	2674.5	2674.5	Core		12.9	4.3	0.04	0.02	3.52	0.67	4.19
34/7-28	NOR	98011-91	2676.1	2676.1	Core		6.0	2.2	0.02	0.04	1.73	0.43	2.16
34/7-28	NOR	98011-94	2682.6	2682.6	Core		14.6	2.7	0.02	0.02	2.32	0.35	2.67
34/7-28	NOR	98011-69	2690.0	2690.0	Cuttings		20.0	5.3	0.09	0.14	4.45	0.61	5.06
34/7-28	NOR	98011-98	2691.0	2691.0	Core		10.2	5.1	0.02	0.01	4.32	0.72	5.04
34/7-28	NOR	98011-73	2744.0	2744.0	Cuttings		19.5	9.4	0.15	0.34	7.52	1.36	8.88
34/7-28	NOR	98011-74	2753.0	2753.0	Cuttings		20.0	9.9	0.30	0.52	6.42	2.68	9.10
34/7-28	NOR	98011-76	2780.0	2780.0	Cuttings		20.0	6.4	0.08	0.21	4.16	1.92	6.08
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings		16.5	2.6	0.05	0.15	1.53	0.87	2.39
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings		20.0	1.5	0.05	0.14	0.93	0.43	1.35
34/7-28	NOR	98011-86	2969.0	2969.0	Cuttings		18.0	2.8	0.02	0.11	1.54	1.09	2.63
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings		88.0	0.4	0.02	0.06	0.34	0.01	0.35

Table 4.6 Saturate GC Peak Height Data

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	n C10 mV	n C17 mV	n C18 mV	n C22 mV	n C27 mV	n C32 mV	i C18 mV	Pristane mV	Phytane mV	CPI1 mV	CPI2 mV
34/7-28	NOR	98011-63	2580.0	2580.0	Cuttings		-	7915	8838	15842	24719	18139	697	2752	3376	1.19	1.31
34/7-28	NOR	98011-67	2660.0	2660.0	Cuttings		-	212	471	5380	43781	63180	51	195	279	1.04	1.10
34/7-28	NOR	98011-90	2674.5	2674.5	Core		-	4308	7684	4886	1854	759	540	3212	3819	1.63	2.25
34/7-28	NOR	98011-91	2676.1	2676.1	Core		-	524	1791	7592	3775	1203	87	352	878	1.54	1.93
34/7-28	NOR	98011-94	2682.6	2682.6	Core		-	71930	112335	95863	74833	37202	22980	59611	64775	1.76	2.19
34/7-28	NOR	98011-69	2690.0	2690.0	Cuttings		-	19809	36470	21577	16138	6656	2397	15184	23429	1.45	1.98
34/7-28	NOR	98011-98	2691.0	2691.0	Core		-	41673	56056	79590	53112	28624	12462	29270	31835	1.65	2.05
34/7-28	NOR	98011-73	2744.0	2744.0	Cuttings		-	22343	24005	26953	48784	14236	4917	38619	25454	1.78	2.15
34/7-28	NOR	98011-74	2753.0	2753.0	Cuttings		-	47958	43588	42555	67707	39067	13359	76293	52362	1.50	1.88
34/7-28	NOR	98011-76	2780.0	2780.0	Cuttings		-	9663	11227	18138	39362	14259	1710	11656	6665	1.56	1.61
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings		-	3690	6558	19511	47074	46502	304	2192	2848	1.13	1.12
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings		-	1623	4036	13098	14515	7289	196	1186	1326	1.55	1.62
34/7-28	NOR	98011-86	2969.0	2969.0	Cuttings		-	1914	5141	16236	24918	16701	216	1705	2065	1.18	1.21
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings		-	2984	5905	14294	25689	19722	453	2650	2484	1.29	1.40

Table 4.7 Aromatic GC Data - Peak Heights

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	2MN	1MN	BiPh	2EN	1EN	2,6 +2,7 DMN	1,5 DMN	1,3,7 TMN	2,3,6 TMN	1,3,6 TMN	1,3,5 + 1,4,6 TMN	P	3MP	2MP	9MP	1MP
34/7-28	NOR	98011-63	2580.0	2580.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-67	2660.0	2660.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-90	2674.5	2674.5	Core			Aromatic compounds not identified														
34/7-28	NOR	98011-91	2676.1	2676.1	Core			Aromatic compounds not identified														
34/7-28	NOR	98011-94	2682.6	2682.6	Core			Aromatic compounds not identified														
34/7-28	NOR	98011-69	2690.0	2690.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-98	2691.0	2691.0	Core			Aromatic compounds not identified														
34/7-28	NOR	98011-73	2744.00	2744.00	Cuttings									321	310	233	102	1726	655	327	1055	607
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings		17	45	5	62	87	252	154	492	480	343	171	1381	716	213	919	531
34/7-28	NOR	98011-76	2780.00	2780.00	Cuttings									57	61	48	25	819	253	179	389	245
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-86	2969.0	2969.0	Cuttings			Aromatic compounds not identified														
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings			Aromatic compounds not identified														

Table 4.8 Alkane GC/MS - Peak Height Data and Calculated Ratios

Well	Name	Sample ID	Top Depth	Lower Depth	Sample Type	Location	Ion m/z 491									
							24/3	27 Ts	27Tm	28ab	29ab	29Ts	30d	29ba	30ab	30ba
							Q	A	B	Z	C	C,	X	D	E	F
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings		604	597	3912	223	3806	334	282	2022	5031	2641
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings		512	320	1015	-	1512	352	-	661	1840	630
34/7-28	NOR	98011-94	2682.55	2682.55	Core		576	291	504	1900	901	322	216	385	1480	388
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings		4377	21568	62592	2960	108416	37632	18541	70400	206336	56320
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings		1213	1346	6824	9141	10048	1928	1629	5488	17560	5517
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings		835	961	7164	1294	7888	1176	1101	3973	13088	4937
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings		3432	3808	22144	2758	21344	2784	2109	11145	32232	12251

Table 4.8 Alkane GC/MS - Peak Height Data and Calculated Ratios

Well	Nation	Sample ID	Core Depth	Sample Type	Ion m/z 191											
					31abS	31abR	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	31ba	
					G1	G2	J1	J2	K1	K2	L1	L2	M1	M2	I	
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	2992	3290	544	692	260	250	-	-	-	-	1112
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	968	879	-	-	-	-	-	-	-	-	-
34/7-28	NOR	98011-94	2682.55	2682.55	Core	502	509	-	-	-	-	-	-	-	-	-
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	73560	84649	15186	29632	7936	16208	4249	8544	3248	6992	28208
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	6784	5868	1562	2127	670	912	310	421	190	258	2388
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	7017	5760	1584	1839	547	675	328	288	-	-	2608
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	16362	13881	3768	4064	1168	1306	545	618	238	363	5884

Table 4.8 Alkane GC/MS - Peak Height Data and Calculated Ratios

Well	Location	Sample ID	Peak 1	Peak 2	Sample Type	Ion m/z 217					29aaR	Ion m/z 218		
						27dbS	27aaR	29aaS	29bbR	29bbS		27bbS	28bbS	29bbS
						A	J	Q	R	S		T	B	D
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	566	303	188	343	225	332	352	217	354
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	332	139	68	244	136	154	224	129	187
34/7-28	NOR	98011-94	2682.55	2682.55	Core	716	532	114	268	83	495	227	152	132
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	66414	113536	11600	26944	10896	95211	19183	8946	19680
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	1611	936	360	850	445	1540	636	336	759
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	1565	772	307	776	441	1153	628	368	764
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	8010	4840	938	2655	1300	4179	3377	1478	2306

Table 4.9 AROMATIC GC/MS - peak height data

Well name	Nation	Sample name	Upper depth	Lower depth	Sample type	Lithology	253 Ion				231 Ion						
							H	P	R		a1	b1	c1	d1	e1	f1	g1
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings		330	4632	2940		2368	1702	1921	5662	1806	3246	1504
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings		368	812	604		217	155	382	1152	399	760	313
34/7-28	NOR	98011-94	2682.55	2682.55	Core		304	335	478		-	-	-	-	-	-	-
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings		17346	36736	33190		13648	2728	14798	22281	14781	13079	18496
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings		1039	5400	4353		3284	544	511	1034	1052	601	471
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings		1182	8416	8816		2252	394	694	815	1206	535	346
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings		3511	9113	12320		2504	719	2212	2796	2708	1618	1119

Table 4.10 AROMATIC GC/MS - peak height data

Well name	Nation	Sample name	Upper depth	Lower depth	Sample type	Lithology	178 Ion			192 Ion				184 Ion		198 Ion				
							P			3 MP	2 MP	9 MP	1 MP			DBT		4 MDBT	3&2 MDBT	1 MDBT
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings		10521			2870	4439	5847	5844			767		1085	369	574
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings		22939			4465	6377	8428	6356			1869		2146	836	957
34/7-28	NOR	98011-94	2682.55	2682.55	Core		7584			2793	4204	5275	2894			855		1165	583	682
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings		419328			128128	99200	189696	156160			79306		33122	25572	75769
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings		167149			50944	67968	114176	77312			19457		17248	7976	8544
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings		222976			45632	71296	101760	60480			9110		5652	2644	2813
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings		210944			51702	56429	70224	49604			8171		4886	2864	4443

Table 4.11 Alkane GC/MS - Peak Height Data and Calculated Ratios

Well	Notes	Sample	Weight	Log	Sample	Hop/Ster	%TS	%ZvsC	%HOP35vs34	%Hop32S/S+R	%TriHop	%DiaSt27
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	28.45	13.24	5.53	ND	44.01	10.72	61.66
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	14.49	23.97	0.00	ND	ND	21.77	59.71
34/7-28	NOR	98011-94	2682.55	2682.55	Core	13.42	36.60	67.83	ND	ND	28.02	75.93
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	16.29	25.63	2.66	44.46	33.88	2.08	77.59
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	43.34	16.47	47.64	38.00	42.34	6.46	71.70
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	32.58	11.83	14.09	0.00	46.28	6.00	71.36
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	20.67	14.67	11.44	34.07	48.11	9.62	70.34

- Hop/Ster** = $27Ts+27Tm+28ab+29ab+29ba+30ab+30ba+homohopanes/27bbS+28bbS+29bbS$
- %TS** = $100*27Ts/(27Ts+27Tm)$
- %ZvsC** = $100*28ab/(28ab+29ab)$
- %HOP35vs34** = $100*(35abS+35abR)/(34abS+34abR+35abS+35abR)$
- %Hop32S/S+R** = $100*32abS/(32abS+32abR)$
- %TriHop** = $100*24/3 / (24/3+30ab)$
- %DiaSt27** = $100*27dbS/(27dbS+27bbS)$

Table 4.12 Alkane GC/MS - Peak Height Data and Calculated Ratios

Well	State	Sample ID	Peak 1	Peak 2	Sample Type	%St27	%St28	%St29	%29S/S+R	%29bb/aa+bb
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	38	24	38	37.96	52.21
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	41	24	35	33.89	63.12
34/7-28	NOR	98011-94	2682.55	2682.55	Core	44	30	26	20.52	36.56
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	40	19	41	15.55	26.16
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	37	19	44	25.20	40.53
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	36	21	43	27.94	45.46
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	47	21	32	24.67	43.60
<p> %St27 = $100 \times 27bbS / (27bbS + 28bbs + 29bbS)$ %St28 = $100 \times 28bbS / (27bbS + 28bbs + 29bbS)$ %St29 = $100 \times 29bbS / (27bbS + 28bbs + 29bbS)$ %29S/S+R = $100 \times (29aaS + 29bbS) / (29aaS + 29bbS + 29aaR + 29bbR)$ %29bb/aa+bb = $100 \times (29bbS + 29bbR) / (29aaS + 29aaR + 29bbS + 29bbR)$ </p>										

Table .13 Aromatic GC/MS - Peak Height Data and Calculated Ratios

Well name	Nation	Sample name	Upper depth	Lower depth	Sample type							
						MPI 1	%Ro	MDR	MDR 1	MDR 2,3	MDR 4	DBT/P
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	0.49	0.70	1.89	0.75	0.48	1.41	0.07
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	0.43	0.66	2.24	0.51	0.45	1.15	0.08
34/7-28	NOR	98011-94	2682.55	2682.55	Core	0.67	0.80	1.71	0.80	0.68	1.36	0.11
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	0.45	0.67	0.44	0.96	0.32	0.42	0.19
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	0.50	0.70	2.02	0.44	0.41	0.89	0.12
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	0.46	0.67	2.01	0.31	0.29	0.62	0.04
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	0.49	0.69	1.10	0.54	0.35	0.60	0.04

MPI 1 = $1.5 \cdot (2MP + 3MP) / (1MP + 9MP + P)$

%Ro = $0.6 \cdot MPI\ 1 + 0.4$

MDR = $4MDBT / 1MDBT$

MDR 1 = $1MDBT / DBT$

MDR 2,3 = $2,3MDBT / DBT$

MDR 4 = $4MDBT / DBT$

Aromatic GC Data - Peak Heights

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	2MN	1MN	BiPh	2EN	1EN	2,6+2,7 DMN	1,5 DMN	1,3,7 TMN	2,3,6 TMN	1,3,6 TMN	1,3,5 + 1,4,6 TM	P	3MP	2MP	9MP	1MP
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-90	2674.53	2674.53	Core	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-91	2676.05	2676.05	Core	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-94	2682.55	2682.55	Core	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-69	2690.00	2690.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-98	2690.95	2690.95	Core	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-73	2744.00	2744.00	Cuttings								321	310	233	102	1726	655	327	1055	607
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	17	45	5	62	87	252	154	492	480	343	171	1381	716	213	919	531
34/7-28	NOR	98011-76	2780.00	2780.00	Cuttings								57	61	48	25	819	253	179	389	245
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-80	2861.00	2861.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	Normal aromatic compounds either very weak or obscured															
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	Normal aromatic compounds either very weak or obscured															

Pyrolysis GC Peak Area Data

Well Name	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 %	C2-C5 %	C6-14 %	C15+ %
34/7-28	NOR	98011-100	2668.0	2668.0	Core	3.3	8.3	40.3	48.1
34/7-28	NOR	98011-102	2672.0	2672.0	Core	3.0	11.6	45.1	40.3
34/7-28	NOR	98011-106	2679.6	2679.6	Core	6.3	14.1	42.6	37.1
34/7-28	NOR	98011-107	2686.1	2686.1	Core	5.1	11.7	41.1	42.1
34/7-28	NOR	98011-110	2690.7	2690.7	Core	9.2	22.0	57.3	11.4
34/7-28	NOR	98011-115	2699.8	2699.8	Core	7.4	18.4	50.1	24.2
34/7-28	NOR	98011-118	2704.4	2704.4	Core	12.5	30.4	53.0	4.1
34/7-28	NOR	98011-121	2709.5	2709.5	Core	5.3	21.4	46.2	27.1
34/7-28	NOR	98011-129	2721.2	2721.2	Core	4.8	18.2	51.8	25.1
34/7-28	NOR	98011-78	2825.0	2825.0	Cuttings	5.8	22.1	47.7	24.4
34/7-28	NOR	98011-80	2861.0	2861.0	Cuttings	5.8	19.5	62.3	12.4
34/7-28	NOR	98011-88	3005.0	3005.0	Cuttings	7.0	18.1	61.6	13.3

Saturate GC/MS - Peak Height Data

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Ion m/z 191									
						24/3	27Ts	27Tm	28ab	29ab	29Ts	30d	29ba	30ab	30ba
						Q	A	B	Z	C	C,	X	D	E	F
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	604	597	3912	223	3806	334	282	2022	5031	2641
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	512	320	1015	-	1512	352	-	661	1840	630
34/7-28	NOR	98011-94	2682.55	2682.55	Core	576	291	504	1900	901	322	216	385	1480	388
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	4377	21568	62592	2960	108416	37632	18541	70400	206336	56320
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	1213	1346	6824	9141	10048	1928	1629	5488	17560	5517
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	835	961	7164	1294	7888	1176	1101	3973	13088	4937
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	3432	3808	22144	2758	21344	2784	2109	11145	32232	12251

Saturate GC/MS - Peak Height Data

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Ion m/z 191										
						31abS	31abR	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR	31ba
						G1	G2	J1	J2	K1	K2	L1	L2	M1	M2	I
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	2992	3290	544	692	260	250	-	-	-	-	1112
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	968	879	-	-	-	-	-	-	-	-	-
34/7-28	NOR	98011-94	2682.55	2682.55	Core	502	509	-	-	-	-	-	-	-	-	-
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	73560	84649	15186	29632	7936	16208	4249	8544	3248	6992	28208
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	6784	5868	1562	2127	670	912	310	421	190	258	2388
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	7017	5760	1584	1839	547	675	328	288	-	-	2608
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	16362	13881	3768	4064	1168	1306	545	618	238	363	5884

Saturate GC/MS - Peak Height Data

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Ion m/z 217						Ion m/z 218		
						27bbS	27aaR	29aaS	29bbR	29bbS	29aaR	27bbS	28bbS	29bbS
						A	J	Q	R	S	T	B	D	F
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	566	303	188	343	225	332	352	217	354
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	332	139	68	244	136	154	224	129	187
34/7-28	NOR	98011-94	2682.55	2682.55	Core	716	532	114	268	83	495	227	152	132
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	66414	113536	11600	26944	10896	95211	19183	8946	19680
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	1611	936	360	850	445	1540	636	336	759
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	1565	772	307	776	441	1153	628	368	764
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	8010	4840	938	2655	1300	4179	3377	1478	2306

Saturate GC/MS - Peak Height Data

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Ion m/z 177		Ion m/z 191				Ion m/z 217				Ion m/z 218				
						25nor28ab	25nor30ab	23/3	25/3	24/4	26/3	27dbR	27aaS	27bbR + 29db	29dbR	27bbR	28bbR	29bbR	30bbR	30bbS
								P	R	S	T	B	G	H	K	A	C	E	G	H
34/7-28	NOR	98011-63	2580.00	2580.00	Cuttings	-	-	1161	328	213	810	346	376	512	208	506	226	458	67	51
34/7-28	NOR	98011-67	2660.00	2660.00	Cuttings	-	-	768	240	221	381	140	182	289	147	290	146	365	-	-
34/7-28	NOR	98011-94	2682.55	2682.55	Core	-	-	1104	322	152	420	507	372	548	339	403	233	253	51	67
34/7-28	NOR	98011-74	2753.00	2753.00	Cuttings	-	-	9460	3497	2060	11025	57448	46912	63066	42176	43368	16960	32768	4062	8274
34/7-28	NOR	98011-78	2825.00	2825.00	Cuttings	-	-	2194	550	392	2032	1101	669	2512	1248	1488	564	1285	121	148
34/7-28	NOR	98011-86	2969.00	2969.00	Cuttings	-	-	1565	519	274	1601	1045	617	2167	1001	1363	511	1256	115	130
34/7-28	NOR	98011-88	3005.00	3005.00	Cuttings	-	-	5936	1980	1481	5233	5208	3559	6944	3064	5784	2225	3774	482	470